

April 1954

house + home

For complete contents, see p. 97

The split level

On Long Island it outsells the ranch house four to one (p. 110);
across the country architects find ways to improve its design (p. 120)

Millwork—part II

Polled by HOUSE & HOME, architects and builders vote decisively
for the development of contemporary stock windows;
progressive lumbermen begin to meet their need (p. 140)

News

Are mortgage bankers headed for extinction? MBA's vice-president fears they may be—
with private builders not far behind (p. 134)

Builder house

"If you want a modern house, you'd better live in California,"
says Connecticut VA, heavily penalizing contemporary builder house (p. 136)

John Yeon

The apparent informality of his three latest houses
conceals some highly original thinking about detailing, siting, composition of rooflines
and the shaping of spaces (p. 98 and below)





Floor: Jackstraw K655.
Counter Top: Gold Seal Gray Vinyl Top.
Wall: Gold Seal Red Tone Congowall.

Rooms look bigger..
homes sell faster..
with Gold Seal Nairn
Inlaid Linoleum

Jackstraw

TRADE-MARK ®

Have you ever seen a floor make a small room look so big? The colorful Jackstraws seem to push back walls and let in light. *Every* house-hunting couple is looking for extra large, airy rooms. You can convince them they've found their dream house in *your* house . . . with the help of "Jackstraw" in Gold Seal Inlaid Linoleum. Look at the talking points it gives you! "Jackstraw" makes decorating easy . . . in every pattern there are four different colors to work with! It's practical, too . . . long wearing, grease resistant and easy to clean.

It's so resilient customers notice the comfort underfoot. Your customers have seen "Jackstraw" in national advertising—they *know* it. Next time you build, make your home easier to sell. Specify "Jackstraw" in Gold Seal Inlaid Linoleum. You *know* it will be a success! By-the-yard or in 9" x 9" tiles it carries the famous Gold Seal guarantee of satisfaction or your money back—your assurance of quality! Mail coupon for detailed information . . . and for free Gold Seal sign to use in model homes.

GOLD SEAL®



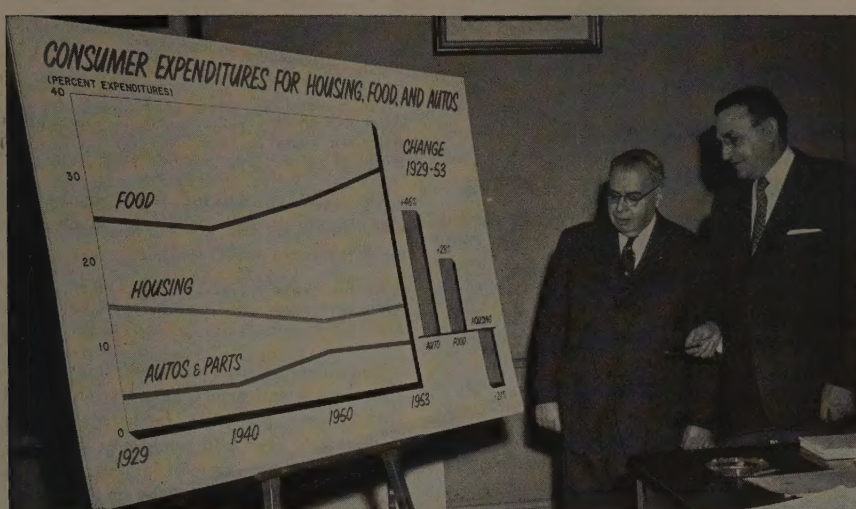
Floors and Walls
CONGOLEUM-NAIRN INC.

Kearny, N. J. © 1954

Builders' Service Dept., HH-4
Congoleum-Nairn Inc.,
Kearny, N. J.

Send me more information ☐
Send me free Gold Seal sign ☐

NAME
FIRM
ADDRESS
CITY STATE



HOUSING'S SHARE of consumer expenditures, NAHB President Hughes (r) told Rep. Wolcott, has dropped 21% from the 14.5% it got in 1929. Housing's '53 share was only 11.4%.

Housing bill hearings

- Homebuilders find themselves closer to CIO and AFL views than to the lending fraternity, which damns FNMA
- All sides criticize proposed FHA Sec. 221. Public housing (not in the bill) becomes the usual political football

Usually, when Congress is considering a housing bill, labor groups and do-gooders get in one corner and the groups that comprise the private building industry get in another for the battle over what should be done. Last month, as the House and Senate banking committees held hearings on the 1954 Housing Bill, things were different.

Strange as it seemed, NAHB took a position closer to that of the CIO and AFL than to any other segment of the private industry (except realtors). In the topsy-turvy alignment, both labor and homebuilders seemed to agree that the streamlining of FHA programs, use of Federal National Mortgage Assn. as a tool for welfare financing and the 40-year \$200-down FHA Sec. 221 loans for slum displacees, were steps in the right direction. And builders, labor and realtors were in general alignment with public housers in advocating more and more government aid to housing.

As expected, almost everybody found some faults with the omnibus legislation, which would give federal housing aids their biggest shake-up in a generation. Strange and not-so-strange alignments bobbed up (see chart "Where They Stand" on next page). NAHB, NAREB, mortgage bankers, the CIO and US Chamber of Commerce joined in opposing Presidential control over down payments and amortization on FHA and VA loans. Their spokesmen pointed out that such power would whipsaw 40% of the new housing market under threat of political manipulation. But almost everybody (except the veterans' lobby) agreed that flexible interest rates controlled by the executive branch were the best way to smooth the uneven flow of FHA and VA mortgage money that now plagues homebuilding.

Goals too low? NAHB, labor unions and public housers agreed the administration's 1-million-a-year housing goal was too low to meet the nation's needs and begin to wipe out slums. They had different ideas of what the target should be. NAHB President R. G. "Dick" Hughes proposed 1.4 million new

homes a year for the next ten years (1 million homes "larger and better in design," 250,000 Title I, Sec. 8-type homes and 150,000 rental units under urban redevelopment programs). In addition, said Hughes, the nation must rehabilitate 600,000 housing units a year—250,000 through "trade-in" plans and 350,000 through local law enforcement drives. NAHB saw no need for any public housing.

The AFL and the National Housing Conference (public housing's biggest lobby group) called for 2 million new homes a year but including 200,000 public housing units. NHC President Ira S. Robbins foresaw the biggest housing need of all. Said he: "Even if we build 2 million units a year and rehabilitate 400,000 additional units each year, 5 million American families will still be using homes which were substandard in 1950 when 1970 arrives."

On the other hand, lenders as well as the US Chamber of Commerce wanted less instead of more government tinkering with the building economy, were opposed to most of the provisions of the bill. Troubling the bankers was

the fear of "overbuilding." Warned the emissary from the American Bankers' Assn.: a government-supported secondary market "will tend to overstimulate building leading to the overproduction of residential properties."

The big issues. Not only was there sharp cleavage over the underlying philosophy of the bill, but the housing industry found itself thoroughly divided over many a specific proposal. The biggest issues: public housing (not even mentioned in the bill), the overhaul of Fanny May, FHA's proposed 40-year, \$200-down Sec. 221 for slum displacees, and flexible mortgage interest rates, down payments and amortization.

Labor and public housing groups, vexed at omission of their pet program, were not a bit mollified by assurances from Chairman Jesse Wolcott (R, Mich.) of the House banking committee that provision for 35,000 new public housing starts recommended by President Eisenhower could safely be left to the appropriations committee. House Democrats repeatedly accused the administration of not acting in good faith by this maneuver. Their point: if left to the unsympathetic appropriations committee, chances are there will be little or no public housing next year.

In the Senate, Minority Leader Burnet Maybank (D, S.C.) of the banking committee introduced an amendment to restore authority to build 135,000 public housing units a year. His aim: to repeal restrictions put on public housing last year in the appropriations bill. (Irrespective of what happens in Congress, prospects are that few more than \$35,000 federal public housing units will go up in fiscal 1954-55; advance planning has slowed too much to permit a bigger volume.)

Faint white hope? In supporting the proposed FHA Sec. 221—the GOP white hope for letting private enterprise move into the area now served by public housing—HHF Administrator Albert M. Cole again admitted the plan was "frankly experimental." Recognizing that private lenders would not buy 40-year mortgages on riskier property at the same 4½% interest they get for 30-year loans, Cole stressed the gimmicks by which the administration hopes to sweeten the loans enough to



LIFE INSURANCE plea to dump Fanny May, let insurance companies set up voluntary committee to steer loans into remote areas was made by Carrol M. Shanks (r), president of Prudential. He was accompanied by Milford A. Vieser (l), vice president of Mutual Benefit Life and John G. Jewett, Prudential Vice president.

Builders, HHFA rap 3% contribution to Fanny May; lenders balk at 40-year loans

compensate for that gap. Not only would FHA offer to take back Sec. 221 loans in good standing after 20 years in return for 10 year debentures. Cole also disclosed: "We are prepared to have FNMA agree in advance to buy any such loans from the lender upon default," thus giving lenders a cash settlement instead of government paper. Moreover, said Cole, FNMA will buy a "modest part" of any Sec. 221 loan when it is first made.

Despite such bait, Republicans and Democrats, public and private housers alike testified that Sec. 221 will not work the way it was written. Builders and realtors urged that the proposed \$7,000 cost limit be upped to \$7,600 (\$8,600 in high-cost areas) as proposed by the President's housing advisers. Labor and public housers predicted that a \$7,000 limit was far too low to permit a good house—especially

in cities where the need is greatest. Cole conceded that "we want to avoid tying it down to \$7,000 so completely that if the experiment doesn't work at this level we will be unable to change it. . . . It might be \$8,000 or \$8,600." Said Rep. Abraham J. Multer (D, N.Y.): "I have been asking builders all over the country if they could build a \$7,000 house. I have been unable to find one who thinks he can. The only thing they can build is tinderboxes which FHA would not insure."

As President Carrol Shanks of Prudential Insurance Co. saw it, life insurance companies will not buy Sec. 221 loans unless the term is sliced from 40 to 30 years, and more steps are taken to "guarantee the investor against loss at foreclosure." Shanks pointed out that a 40 year \$7,000 mortgage at $4\frac{1}{2}\%$ amortizes much slower than the property depreciates:

After five years	\$350
After ten years	791
After 20 years	2,037

On a 30 year payoff, said Shanks, the amortization is still slow, but "much more acceptable":

After five years	\$623
After ten years	1,400
After 20 years	3,598

The difference in monthly carrying charges (for interest and amortization) is only \$3.99 (\$35.49 against \$31.50), he noted. On top of that, a 40 year loan would cost the homeowner \$2,344 more in total interest; so all in all, a 40 year loan is "socially undesirable."

Voluntary committee. Shanks, the most influential big mortgage lender to testify on a housing bill in years, poured his sharpest criticism on the proposed conversion of Fanny May into a dual purpose vehicle (half normal market operations, half Treasury-financed special assistance to selected programs). Cried

WHERE THEY STAND ON HOUSING CHANGES: *highspots of testimony before the House banking committee*

The issues	NAHB	NAREB	MBA	US Savings & Loan League	Nat'l Retail Lumber Dealers
FNMA overhaul	Administration plan for normal facility "unworkable." Urged 2% instead of 3% capital contribution, permanent gov't control, authority to buy loans over \$12,500, continued one-for-one plan.	Endorsed general idea, but urged authority to buy loans over \$12,500, limit on fees of $\frac{1}{2}\%$, power to issue debentures to 15 times its capital instead of 10, big boost in lending ceiling and other changes.	Want FNMA as suggested by President's committee. 3% contribution makes "normal" plan unworkable. Welfare operations could disrupt market.	Urged return to plan offered by President's advisory committee.	Proposed changes do not solve problem: fees plus 3% contribution is too much. Should be capital stock set up; \$12,500 limit should be removed.
FHA Sec. 221 (40 years—\$200 down)	Endorsed, but urged higher premium to cover greater risk, \$7,600 to \$8,600 ceiling instead of \$7,000 and deletion of restriction to displacees.	Endorsed, but urged \$7,600-\$8,600 mortgage limits.	Doubted it will be attractive to lenders. Unnecessary plan. Outright subsidy better.	Better than public housing, but unsound and workable only with costly gov't support.	No comment.
Public housing	Against it, but no comment at hearings.	Opposed.	In effect: no comment.	Opposed.	No comment.
Flexible mortgage terms and interest	No objection to Presidential control of interest, but strongly opposed flexible control for down payments, amortization.	Applauded flexible interest but urged power go to gov't committee, not President. Opposed flexible control for down payments, amortization because it creates market uncertainty.	Accepts flexible interest but opposed subjecting FHA-VA loans to political control, warned this will reduce their volume.	Opposed 30 year amortization, easier terms on old homes. Endorsed flexible interest, but would give control to committee, not President.	Opposed Presidential discretion over down payments and amortization, urged Congress to fix liberalized terms. Approved flexible interest set by President.
Urban renewal	US must build 1.4 million new houses a year, rehabilitate 600,000 to halt spread of slums. Endorsed administration aims generally, including FHA Sec. 220.	Approved, but urged federal aid hinge on "actual" not planned rehabilitation drives. Urged federal guarantee for local assessment bonds to finance renewal.	Complete endorsement.	Endorsed. Asked law to let S & Ls invest up to 10% of assets in land earmarked for homes. Urged cities act, not just plan, to qualify for aid.	Endorsed.
Open-end mortgage	No comment (not asked; NAHB supports idea).	Warm endorsement as big aid to rehabilitation, modernization and expansion of houses, but urged limitation to original amount of mortgage.	"Very useful device."	No comment.	Endorsed—"heartily."

he: "It reflects a philosophy that housing must be kept going at boom level regardless of the basic market forces. . . . Through continued and strengthened government propping of the housing industry, it will retard technological improvements in housing" and retard efforts to cut the cost of homes. "This program is on the direct road to public control of housing and home financing. . . . It is incompatible with the free enterprise objective which has often been mentioned in the bill."

Instead of overhauling Fanny May, Shanks proposed legislation to exempt insurance companies from antitrust prosecution to permit them to form a nationwide committee under HHFA direction to steer mortgage money for remote areas and small towns, and for minority housing. He suggested a National Voluntary Mortgage Credit Extension Committee under chairmanship of the HHFA Administrator, with the chairman of the Federal Reserve and 14 representatives named by HHFA to represent each type of financing institution, builders and realtors. In New Jersey, where an "informal

committee" of this type already operates, Shanks pointed out, not a single direct VA mortgage loan has been made for "many years."



LUMBER DEALERS' spokesmen, H. R. Northup (r) and Hubert E. Else, wait Northup's turn to testify to House. Northup warned of uncertainty and instability in housing if down payments and amortization are left up to the President, urged higher service charges for remote area loans.

Biting Fanny May. Though he supported most of the proposed overhaul for Fanny May, even HHFA Administrator Cole objected to some features of the housing bill's proposals. He



US SAVINGS & LOAN League Spokesman M. K. M. Murphy called FHA reserves "dangerously inadequate," predicted over 1 million new homes this year "without any legislation at all." He said proposed Sec. 221 "amounts to virtually direct lending by government."

US C of C	Life Insurance Assn.	American Bankers' Assn.	Nat'l Housing Conference	NAHRO	CIO
Endorsed flexible intermediary market aspect, but oppose 3% stock requirement. Opposed special aid program for FNMA.	Completely opposed. Instead, urged law to permit voluntary lenders committee to help make loans flow to remote areas and small towns.	"No need for gov't supported secondary market. FNMA will overstimulate housing."	Should make 40 year loans at 4½% for middle-income families. Should make 40 year, 3½% loans for low-income groups.	Not enough funds authorized for special aid program.	
"Unsound experiment."	Life companies will not buy many unless term is cut to 30 years and law lets investors trade defaulted mortgage for debentures at 99%.	Opposed.	Low-cost housing is good idea, but \$7,000 limit is too low to produce good homes, especially in cities where need is most.	Endorsed, but said \$7,000 maximum price won't work; urged ceiling of \$8,600 (\$10,000 in high-cost areas).	Won't work; \$7,000 house is too cheap to be good, should not be restricted to relocatees.
No comment (were not asked). (Opposed before Senate.)	No comment.	No comment.	Demanded 200,000 units a year for the next 5 years "at least."	Urged end to limits on starts below 50,000 to 200,000 a year envisaged by 1949 Housing Act.	Urged full restoration of level permitted by 1949 Housing Act.
Endorsed flexible interest, but opposed Presidential control over maturities and loan ratios because permits political manipulation of VA and FHA programs.	Endorsed both flexible interest and terms but opposed general easing of down payments and longer amortization.	Opposed to 30-year amortization. Approve flexible interest and fees.	Supported, except opposed longer amortization for old homes and "liberal credit for \$25,000-up homes."	No comment.	Objected to higher interest rates—flexible or not. Presidential control over maturities and loan ratios would slow output by causing uncertainty.
Endorsed strongly.	Endorsed, including FHA Sec. 220.	Noncommittal.	Renewal is "no substitute" for redevelopment and public housing but supported boost for rehabilitation and FHA Sec. 220.	Endorsed objectives, but want federal aid not contingent on workable renewal plans. Urged more concern over relocation.	Support rehabilitation but warn it will impede housing if "held up as major answer to slums."
Endorsed.	No comment.	Opposed in principle. Claimed could lead to borrowing for consumer credit purposes.	No comment.	No comment.	No comment.

Announcing . . . a new builders' line of



**CHRYSLER
AIRTEMP
"PROJECT"
FURNACES**

GIVES YOU *the selling "plus" of all the prestige of the famous*

CHRYSLER AIRTEMP *name . . .* **ECONOMICALLY!**

The new Chrysler Airtemp "Project" Furnaces are engineered for teaming with Chrysler Airtemp Air-Cooled Air Conditioners to provide perfectly balanced Year 'Round Air Conditioning. This economical furnace, plus your big installation savings on Chrysler Airtemp Air-Cooled Cooling Units which require no plumbing, lets you build-in Year 'Round Air Conditioning at less cost to you and to your home buyers. And remember, Chrysler Airtemp Air-Cooled Air Conditioners take up no living area floor space whatsoever!

Less than a year ago Chrysler Airtemp introduced the most sensationally improved line of gas and oil-fired furnaces in the entire industry. And now you can have the same smart styling, the same compact, space-saving designs, the same advanced engineering features which assure more efficient and more economical heating—in these brand new Chrysler Airtemp Project Furnaces. They're priced for the volume user, for the project builder who wants a name people know and have confidence in—Chrysler Airtemp. Call your nearby Chrysler Airtemp Dealer (he's in the Yellow Pages) . . . or send coupon for complete details.

CHRYSLER AIRTEMP

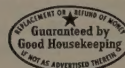
HEATING • AIR CONDITIONING
FOR HOMES, BUSINESS, INDUSTRY
Airtemp Division, Chrysler Corporation, Dayton 1, Ohio

Comfort Zone



THE TRULY MODERN HOME IS AIR CONDITIONED

Airtemp Division of Chrysler Corporation
P.O. Box 1037, Dayton 1, Ohio



HH-4-54

Please send complete details on Chrysler Airtemp "Project" Furnaces.

Name

Address

City Zone State

called the 3% capital contributions from anybody selling a mortgage to Fanny May's normal operation "so high" they may prevent it from functioning [just as most lenders would like—Ed.]. On the 3% point, Cole was backed up by builders, retail lumber dealers and even the MBA (which also called the proposed welfare side of Fanny May operations a "financial bomb in the closet" ready to become an "engine of inflation" like Fanny May of '49 and '50). NAHB's Dick Hughes urged, among other things, a 2% capital contribution, permanent government control of FNMA and authority for Fanny May to continue its one-for-one plan with its existing portfolio to avert a year's wait while a new portfolio is built up.

If the 3% fee is retained, will buyers have to pay it? HHFA's Cole found himself—like VA's Bert King last year—insisting that a service charge would "not necessarily" be passed back to buyers. Builders knew better. Hughes admitted the 3% (and other fees that could raise the price of doing business with FNMA to 6½ to 7%) would be thrust on home buyers "if builders can figure a way."

VA objections. From VA's Bert King, the House heard testimony out of harmony with the administration housing theme, but typical of the independent attitude VA usually takes regardless of what party runs the White House. King, testifying without Budget Bureau approval of his remarks, attacked the proposed formula to give the President discretion to set VA and FHA interest rates up to 2½% above the going rate on government longterm bonds. Instead, King agreed with Democrats that 1½% would be spread enough. He also complained, as did veterans' lobbyists, that giving the President power to liberalize FHA terms as much as VA terms would "dilute" veterans' preference.

Snorted Rep. D. Bailey Merrill (R, Ind.), himself a veteran: "I don't see why we should worship at the shrine of veterans' preference when all we are trying to do is give everybody a better deal."

Two important changes envisaged by the housing bill won general approval: 1) the new concept of urban renewal to broaden HHFA's efforts to spur redevelopment, 2) the open-end mortgage. Only the arch-conservative American Bankers' Assn. opposed the open-end mortgage. Committeemen indicated they would pay little heed.

Chairman Wolcott, anxious to hurry the legislation toward floor action lest it get lost in the adjournment rush, asked scarcely a question and frequently, in cloakroom huddles preceding hearings, he would ask a witness to spare his time by keeping testimony brief.

Even so, the hearings stumbled over exasperating delays. One witness, NAREB's Fritz Burns, flew from Hawaii to testify one Thursday only to find the session postponed because of a Democratic caucus on the tax bill. (He promptly flew back to Los Angeles.) In all, the 45 witnesses took a full three weeks to say their pieces to the House. The housing industry would be lucky to have a law by mid-year.

Homebuilding heads for a 1.2 million start year

After a dull fourth quarter, home sales took a spurt last month and spirits and production plans of the nation's builders rose together. Plentiful mortgage money meant lenders were agreeing to lower down payments and longer maturities. And that meant more customers.

After its annual survey of builders' intentions, HOUSE & HOME's sister magazine, FORTUNE, predicts in its April issue that 1954 will see 1.2 million starts—the second greatest homebuilding year in history (still No. 1: 1950).

The general spring climate of optimism acknowledged, but was unfazed by, the fact that homes were continuing to get harder to sell. What had happened, said builders in such diverse spots as San Diego, Oklahoma City and Wichita, was that 1953's "mortgage recession" had shaken many a little (3-to 10-house-a-year) builder back into subcontracting or out of the housing field entirely. Profit margins might be shaved, and some builders were fretting over what the spring round of labor pay hikes would do to their costs. But the chance of a recession slowing housing seemed far away.

Air-conditioning benefits outlined in AGA survey

Air conditioning prevents headcolds, increases appetite, keeps the family together on hot nights and cuts recreation costs. More evidence of the fact that it's true what they say about cooling units (H&H, Mar. '54) appeared in a survey of 325 homeowners made by the American Gas Assn. The families lived in different parts of the country; 60% had at least one child; all had gas air conditioners, the majority a five-ton model.

The health question. Some 66% of the homeowners interviewed reported they had noticed a change in the general health of the family and about one-fifth of these said they had saved on doctors' bills and medicines:

Better appetites and eating habits.....	45%
Relief from hay fever.....	32%
Fewer colds	23%
Health and comfort of baby improved.....	15%
Relief from asthma.....	11%

Less house cleaning was mentioned as a benefit by 83% of the families. Some reported savings of from \$50 to \$250 a year.

About half the families interviewed reported they ate more meals at home and half of these said they consequently saved money. Of 71% reporting a change in recreation habits, 85% said they spent more evenings at home. Other trends:

Fewer week ends in the country.....	42%
Fewer air-conditioned movies.....	41%
Fewer trips to parks and pools.....	28%
More entertainment at home.....	19%

How cold is it? The survey pointed out that a thermostat setting of between 70 and 75° was favored by a majority (55%) of the

homeowners. Only 9% set the thermostat at 70° or lower; 34% at between 75 and 80° and 2% at over 80°.

A little over half the families had had to call in a repair man for something other than routine maintenance. Most of the troubles were easily taken care of; the knottiest arose from air distribution difficulties and water problems. There was no question, however, that the advantages outnumbered the spot objections. And 82% of the families thought air conditioning "substantially" increased the value of their homes.



HUMPHREY & HOLLYDAY—WITH CHECK

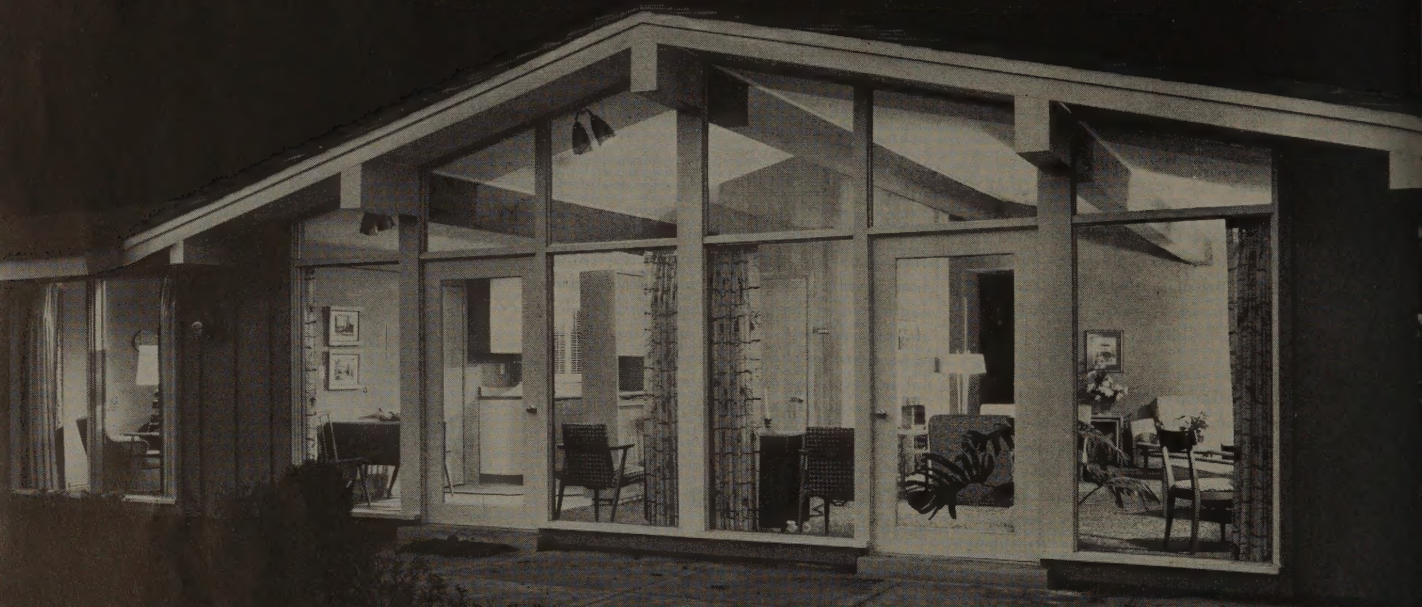
After 20 years, FHA pays last of debt to Treasury

"Outside of the Secretary of the Treasury and a few Texans," cracked FHA Commissioner Guy T. O. Hollyday, "most of us aren't used to these things." The thing: a pale green check for \$16,453,941.49 which Hollyday handed to Treasury Secretary George Humphrey last month, thus completing repayment of all the money advanced by the Treasury since 1934 to set up FHA programs. This amounted to \$65.5 million for operating capital and insurance funds, plus \$20.4 million interest at 2¼%.

Since 1940, FHA has been a money maker for the government. Last fiscal year, it netted the Treasury a surplus of \$91.9 million; this year it is expected to make \$111 million after expenses of \$31.4 million. Now that the Treasury is repaid, FHA officials hope to persuade Congress to let them spend more of FHA's income (from premiums, fees and surplus invested in government bonds) to give better service, preferably in proportion to gross volume. As matters stand now, despite its huge profits, FHA is so understaffed it was recently six months behind in Washington at ruling on new building techniques and processes. The biggest loser from this is the public, deprived of new cost-cutting ideas. Milestone statistics: FHA has insured over \$30 billion of mortgages covering 3.3 million homes and 640,000 rental units. About \$17.5 billion of insured mortgages are still in force.

THE HOMES WHICH ARE SETTING THE NEW
DESIGN TREND FROM COAST TO COAST

scholz *California contemporary* PACKAGE HOMES for 1954



Eventually you will want to join the trend to contemporary design which has captured the imaginations of the nation's home buyers. Why wait?—and let your competition garner your market.

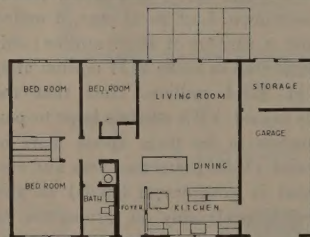
In every craft, profession or business there's always one name that is outstanding . . . in the design and manufacture of contemporary homes, Scholz Homes are the acknowledged pace setters from coast to coast.

Why wait? . . . when Scholz Homes provide you with a complete package of unexcelled sales proven design, the simplest, most easily erected house you have ever built and at a price you can not begin to duplicate locally.

Shown below are but three of the many plans from \$10,000 to \$30,000 with which you can duplicate one of the famed sales record setting projects in your own community. Wire, write or phone. TODAY.

SALES REPRESENTATIVES

Scholz Homes is the fastest growing manufacturer in a rapidly expanding industry offering unparalleled opportunity to men who can fit into our aggressive program.



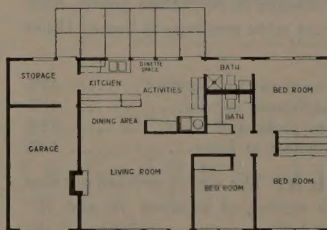
YOUNG MODERN SERIES

1100 sq. ft. plus garage, \$13,000 price range (less lot). Translucent glass wall foyer, large kitchen with nook space, natural mahogany pass thru china cabinet between kitchen and dining room, spacious living room with expanse of floor to ceiling Thermopane opening to patio.

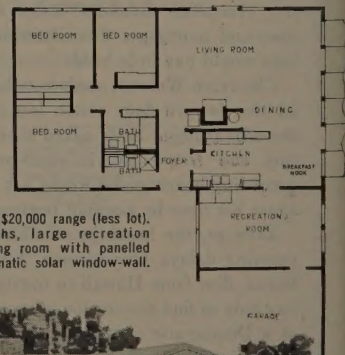


COUNTRY CLUB SERIES

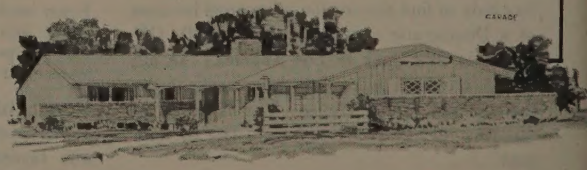
1200 sq. ft. plus garage, \$16,000 range (less lot). 3 bedrooms—2 baths, separate activities room, natural mahogany kitchen.



ROCKY RIVER SERIES



1584 sq. ft. plus garage, \$20,000 range (less lot). 3 bedrooms—2 baths, large recreation room, tremendous living room with panelled fireplace wall and dramatic solar window-wall.



SCHOLZ HOMES, INC.

2001 WESTWOOD

TOLEDO 7, OHIO

Rising subdivision restrictions throttle builders

► **NAHB President Dick Hughes calls it No. 1 problem for homebuilding in the East, No. 2 worry elsewhere**

► **One proposed remedy: let FHA insure homes for temporary use as classrooms until towns can afford standard schools**

If Henry Thoreau were planning to put up a cabin on Walden Pond today he would undoubtedly run up against a minimum lot requirement and cesspool ordinance and would probably be ordered to lay down an asphalt path to his beach. Thoreau died before the storm. The multifarious zoning and subdivision restrictions which have arisen since have put the suburban builder in an economic squeeze.

Last month, homebuilders took the problem to Congress and asked for help. NAHB President R. G. "Dick" Hughes told the House banking committee that more and more local communities are "seeking to slow down and even to prohibit entirely further homebuilding" because they claim they cannot afford the schools and utilities to go with the new population. "In the East," said Hughes, "this now ranks as the No. 1 problem for homebuilders." In the South and West, he put it slightly behind the continuing need for more mortgage money.

The help Hughes sought was a minor amendment to FHA's main program—Title II—to let it insure homes which builders could rent temporarily to impoverished school boards. "We think," said Hughes, "that the statute does not forbid this, but the problem is sufficiently important to warrant a clarifying amendment at this time."

Prospects: not this year. Although some Congressmen showed immediate interest in the scheme, Hughes knew as well as anybody else that chances for getting it enacted this year were slim. But by airing the idea now, builders raised their chances of prodding it through Congress in 1955.

Under the NAHB plan, as developed by First Vice President Nathan Manilow, a builder would form a nonprofit corporation to hold title to and lease the homes doing temporary duty in his project as classrooms. When increasing population or the arrival of industry behind his subdivision raises the bonding capacity of local school boards, Manilow would have the board build a standard school to replace the departmented houses. He would have any profit from the sale of the house-schools go to the school district. Said Manilow last month: "In my judgment, we cannot have continuing high volume of homebuilding, no matter how liberal the financing tools available, unless we cure this problem. I know many builders who have acquired land, done land planning, acquired financing and yet cannot proceed because towns will not issue permits."

Public and legislative opinion on zoning and its application is split drastically. One tenet upon which almost all seem to agree (in the abstract, anyway) is that it should be founded on an over-all plan that will benefit town, county and region over a period of decades. Whatever its theoretical attributes or drawbacks, however, one thing was sure: in almost all cases it ups the cost of homebuilding.

No more room. In simplified form, the increasingly severe enforcement of building restrictions has come about this way: towns which in the 1920s enjoyed an excess of raw land and were taking pains to attract new residents are no longer, in the face of burgeoning migrations from the city, feeling hospitable. They are leery of overcrowded schools and hospitals; traffic-snarled business districts; rundown residential fringes. Phrases like "the fastest growing little community in the county" have fallen into disfavor. Yet selectmen and taxpayers alike are all too aware of the fact that their town is not going to be able to make ends meet without increased revenues. Their choice, therefore, must be either to let in industry (over the oftentimes strenuous objections of residents who don't want to live with industry) or to let in *only* persons who will build large homes (over the objections of builders and customers

who deal in and live in small houses). The industry vs. residential problem is made worse by dispute on the size of the homes.

Critics who say private building provides chiefly for the upper bracket market almost always ignore this grassroots pressure. But the fact is that builders are in the running so far primarily because they have been able to find customers for bigger homes.

Indications of what some builders were up against:

► Neil Ellis of East Hartford, Conn., planned last spring to put up 150 houses there to sell for \$11,000 apiece. In August the town boosted the necessary lot frontage from 60 to 75' and the minimum lot area from 8,000 sq. ft. to a new high of 10,000. The consequently higher costs of curbs, sidewalks and utility installation — plus a stipulation that he lay down a 3" bituminous concrete road—forced Ellis to eliminate 50 houses and to add \$1,000 to the price of the 100 he did build.

► Chicago Builder H. Morton Robbins planned a 320-unit suburban subdivision, meeting the suburb's requirement of 6,500 sq. ft. minimums. His plan was rejected, however, because although it met the local minimum lot requirement it did not meet specific measurements: a 55' frontage and 125' depth. Robbins lost 23 houses in revising the plan. He was also plagued with special specifications on curbs, roadways and catch basins. "I have no objection to sound zoning requirements," he said, "but many of these requirements are simply the whim of the village board. . . ."

► In Illinois and Indiana, some 19 communities were requiring \$400 cash for a building permit. The money goes into a school fund. Others (reported NAHB President Hughes) were requiring homes which would produce

Hedrich-Blessing



A 'house with nine lives' will have national splurge

More than 100 builders have contracted to build this three-bedroom dwelling with nine lives, designed for "Better Homes & Gardens" for nationwide promotion next fall. The 1,415-sq. ft. home has a basic design that allows construction in nine different fashions. Three choices of roof, placement of car shelter and utilization of outdoor living area and indoor play space are

adaptable aspects. Designed by Architect Robert Little of Cleveland, the house—billed by the promoters as the "Home for All America"—is a follow-up to their "Readers' Choice" home of 1953, which was visited by 1 million people in 36 cities. This year's model will be featured in the September issue of *HOUSE & HOME* and "Better Homes & Gardens."

Put the biggest **dollar values** in your bathrooms!

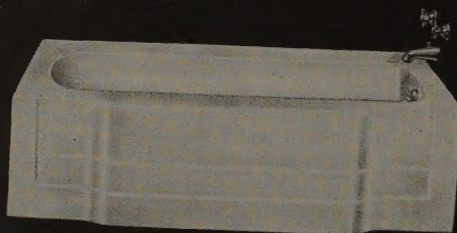
Prospects are looking for greater *value* in new homes these days—and you give them value they can *see*, with Universal-Rundle fixtures. They can see that U/R's Arctic White fixtures are the *whitest* made—can see the exceptional beauty of U/R *matched* colors. A comparison of the finish on U/R fixtures with other brands shows a quality difference that's easy to see. And that smooth, harder-than-steel U/R surface *stays* lovelier, year after year!

Your prospects recognize the U/R name, too—for they have seen U/R fixtures advertised as the world's finest, in their favorite national magazines.

CARLTON



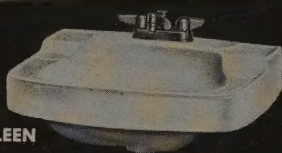
CLIMAX



MASTER MEADOW

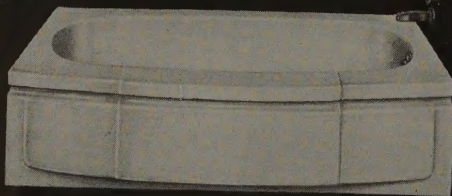
*Masterpieces
of Fine
Fixtures!*

COLLEEN



*Beauty and
Quality
with Economy!*

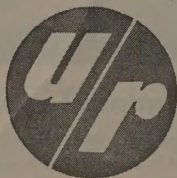
CIVILIAN



CIRO



Write for
Free Catalog!



The World's Finest Bathroom Fixtures

by **Universal★Rundle**

208 River Road, New Castle, Pennsylvania

Plants in Camden, New Jersey; Milwaukee, Wisconsin; New Castle, Pa.; Redlands, Calif.; San Antonio and Hondo, Texas

\$400 taxes a year, on the theory that there would be two children to a family, to be educated at \$200 each.

► The Long Island Home Builders Institute was fighting proposed zoning changes in the town of Huntington. These would up minimum lot sizes from 5,000 and 7,500 sq. ft. to 10,000 sq. ft. and over in some areas. The zoners' avowed aim: to slow homebuilding and thus ease the need for more schools.

► An Eastern builder had been searching for a year in Westchester County, N. Y., for 300 acres of land on which to erect single-family houses at a density of about four houses to the acre. His search had thus far proved fruitless because of zoning restrictions.

Cost comparison. The jump in the price of an acre of land in Nassau County, Long Island, before and after development, was charted a few months ago by Walter Stackler, president of the Long Island Home Builders Institute. Cost of the unimproved land was \$6,000. Cost of the developed land, after adding in 17 items, the most expensive road paving for \$1,225 and the cheapest an outline survey and street signs for \$10 each: \$10,325. Stackler figured that in the particular project he had analyzed the builder could get about four-and-a-half units to an acre.

In Louisville, Clifford Knopf of Town & Country Homes, Inc., submitting a similar comparison based on increased paving costs he was meeting in subdivision work, commented: "We're in the middle on this deal. The VA and FHA are pushing us down and the contractors are pushing us up. Every foot of street, every extra plumbing fixture or piece of sidewalk, pushes the price of that finished house up another notch. And every dime I put into it has to come out of the down payment of the guy who buys the house."

San Diego echoed the high-cost-of-paving complaint. The city requires that the subdivider, in most cases, put down 4" to 6" of decomposed granite mixed with cement, then a sealer and 2" to 3" of asphalt over that. Said T. J. Lords, president of San Diego Building Co., "We know of many instances in this city where 4" of asphalt, laid directly on soil, have stood up in . . . excellent con-

dition. The city's paving requirements increase the builder's costs nine cents a foot for paving alone." San Diego shows evidence of another trend in city planning: allowance for future growth adjacent to a new subdivision. One example is specification for extra-large water mains.

Florida still strong. Not all builders are opposed to zoning, nor does such regulation automatically work hardship on them. In Miami's Dade County, for example (which adheres to a 15-page zoning code) small-home developments are being built for between \$8 and \$9 a sq. ft. (of cost) and even for as low as \$6.40 a sq. ft. The builders were facing a new county regulation on land elevation, however, and a State Board of Health edict on sanitary sewers and disposal plants in filled areas. They figured they could go along with the elevation and the sewer cost—prorating the latter to subdivision houses at \$450-\$600 each—but they balked at building and operating disposal plants.

A basic approach to zoning has been expressed by Frederick T. Aschman, executive director of the City Plan Commission in Chicago, where zoning ordinances are being rewritten. Said Aschman: "Of course these things add to the construction costs. But so does our requirement that every home have a bathroom. Would any builder suggest we eliminate the bathroom? The ideal zoning ordinance is one that requires all builders to conform to the prudent, sensible and economic standards that far-sighted builders would conform to, anyway."

Little fellow out. One of the attention-getting varieties of zoning, the prudence of which has been questioned by a number of authorities, is so-called "snob zoning"—a system followed with increasing asperity by municipal authorities in New York City suburbs. It is the practice of going to great lengths to keep the low-income, small-house resident out of town. The procedure gives rise, of course, to an overall regional situation wherein relatively high income towns become more and more "separate" from relatively low-income towns. Setting up such rules against small houses "stretches the ethical concept," according to the late Arthur C. Comey, planning consultant, ". . . translates snobbish attitudes into law." Commented Gordon Whitenall of Los Angeles at last fall's meeting of the American Society of Planning Officials in Detroit: "It is merely adding extraneous details to our laws to the point where it earns the disgust of the people by trying to regulate every darn move they make."

Some recent developments along this line:

► The town of Bedminster, N. J., put an end to large-scale subdivision activity by adopting a minimum lot requirement of five acres. The ruling was taken to court and sustained.

► The New Canaan (Conn.) Zoning Commission proposed to establish "designed residential districts," over which it would have complete power, especially with regard to limit-

ing the number of houses that could be built in any one year.

► The Planning and Zoning Commission in Greenwich (still the wealthiest residential community in Connecticut) received a letter from Lewis S. Rosenstiel, chairman of the board of Schenley Industries, stating he wished the area in which he owns 1,260 acres be down-graded from a four-acre to a one-acre zone. Said Mr. Rosenstiel's counsel: "It is a furious and unfair restriction upon the owners of the property, substantially decreasing the value and use of their land. . . ." Said the secretary of the Greenwich Commission: "He is entitled to stir this up and see what comes of it. . . ."

The legal aspect. A builder sometimes can gain satisfaction by taking a zoning law to court. A notable decision was handed down in Connecticut's highest appeals court last month with a ruling that the town of Milford acted illegally in refusing to approve plans for a real estate subdivision on the ground it would put undue financial strain on the town for schools, fire and police protection. In the absence of any local law giving the planning commission power to reject a subdivision for such reasons, the court held, refusal to approve the development deprived the landowner of due process of law. (Reaction of Milford's planners: "All we can do is go ahead with the upgrading of the property to put it beyond the reach of the average developer.")

Criticism of restrictive zoning is only one side of the picture and is in itself neither a condemnation of all zoning nor a constructive overall approach to its proper use. Zoning has been responsible for supplying new developments with light, air, space and presumably a chance of being an attractive integral part of what goes up in the next several decades. The trouble with zoning—the trouble that hits builders, anyway—is the economic rub. "One of the hard facts of municipal finance is that residential property does not normally pay its own way," said Max Wehrly, executive director of the Urban Land Institute, recently. "Almost without exception, it costs a city more to service a home than it can collect from the home in property taxes."

The builders are therefore caught in the middle. They recognize the validity of zoning, but through a natural need to come out in the black themselves must fight certain aspects of it which add to their costs. The small-unit developer is in an especially ambivalent position. Zoning, in this respect, has become a roadblock to HHF Administrator Cole's oft-repeated exhortation to builders to shift into the low-price market. The builders want to get into town and people want to buy houses there. But the towns feel that allowing them in threatens municipal solvency. The squeeze seemed likely to tighten, in face of the fact that with over 8 million units built since the war the supply of likely subdivision land was fading fast.

Should FHA insure development costs?

Confronted with a scarcity of improved lots in his own territory, William B. F. Hall of Ft. Wayne, president of the Prefabricated Home Manufacturers' Institute, offered an original solution: have FHA insure 10-year private loans for improving available subdivision land. Hall suggested loans up to 90% of the FHA-estimated replacement cost of the improvements—streets, sidewalks, utilities, etc. Interest would be not less than 4%. Hall's plan is supported by the Indiana Homebuilders Assn. and has been brought to the attention of Commissioner Guy Hollyday.

You and your prospects pay nothing extra for these 10 Quality Features!

Ask these 10 questions before
you buy kitchen equipment!

No increase in cost for kitchen features like these? That's right! For with U/R "Easy Living" Kitchens, these features are yours *at ordinary kitchen equipment prices*. Check them over, and you'll see why "Easy Living" kitchen equipment is giving builders, architects and home buyers a new concept in kitchen value at regular prices.

These 10 quality points are convincing selling points which prove to your prospects that your homes offer solid quality—they're points which will help sell homes for you!



YOUR PROSPECTS RECOGNIZE "EASY LIVING" KITCHENS!

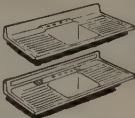
Your prospects are seeing dramatic, full color advertisements about "Easy Living" Kitchens in the magazines they read! These ads feature the 10-point quality test—your prospects recognize "Easy Living" quality!



1. Are there real partitioned compartments under the sink?



2. Is the garbage disposer both QUIET and FAST?



3. Do you have choice of steel or cast iron cabinet sinks?



4. Do the cabinets have strong, trouble-free hinges concealed from the outside?



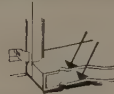
5. Do cabinets and sinks have no-sag, deep-rounded corners?



6. Can you choose any type, color, and pattern of counter?



7. Are the wall and base cabinets Bonderized and are shelves completely adjustable and removable?



8. Do the wall cabinets have double bottoms for rigidity and beauty?



9. Are doors and drawers insulated and sound-proofed?



10. Do drawers operate silently and easily?

Get complete information on U/R "Easy Living" Kitchens!
Write Universal-Rundle Corporation, 231 River Road, New Castle, Pa.



Cabinets of steel
for lasting appeal

"Easy Living" Kitchens
by **Universal-Rundle**

UNIVERSAL-RUNDLE CORPORATION, NEW CASTLE, PENNSYLVANIA
MAKERS OF THE WORLD'S FINEST BATHROOM FIXTURES

HOUSING STATISTICS:

Building materials prices drop again; plywood down to \$80 but upswing is seen

Last summer, the price of building materials began to slide. The drop was broken by a slight upturn in December, but it picked up momentum again in February. BLS wholesale price index for building materials dipped to 119.2—down from the December-January level of 119.6 (see chart). Officials blamed the decline chiefly on price decreases in southern pine lumber and building wire and cable. There were small declines in prices of other soft woods and oak flooring.

Plywood prices—not yet reflected in official statistics—suffered a general price break last month. The generally-accepted \$85 per M sq. ft. for Douglas fir AD index grade $\frac{1}{4}$ " sank to \$80 (a year ago it was \$90). Increased production at new plants, plus reluctance on the part of buyers, were the chief causes. The softwood lumber market, on the other hand, was firming up as buyers sought quick shipment while production was at its seasonal low in the West. Mills were getting from \$65 to \$68 MBF on rush orders of No. 2 and better dimension, although the market for normal shipment was \$62 to \$64.

Whatever the decline, the effect on the price of shelter in the nation would be slow in coming. BLS figures put the index for housing at the end of '53 at 118.9, a new high and comparable with a consumer's price index then of 114.9. (Base used is period, 1947-49.) This estimate takes into consideration rent, utilities and the purchase price of homes. It was up from 116.4 in Dec., '52. The index for residential rent—also at a new high—was 127.6 in December, up from 120.7 the year before.

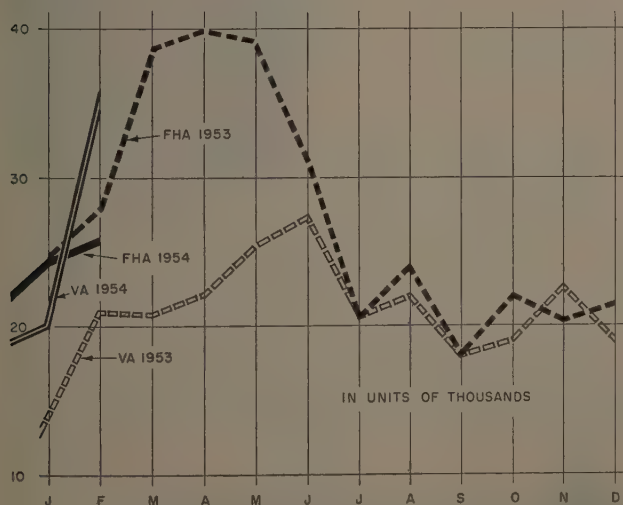
MORTGAGE LENDING ACTIVITY

(Investments in millions of dollars in nonfarm mortgages of \$20,000 or less by various types of lenders)

	S&L assns.	Ins. cos.	Comm. banks	Mutual savings banks	All others	TOTAL
January 1952	404	124	267	79	423	1,298
January 1953	476	111	278	92	441	1,400
January 1954	467	108	263	85	449	1,372
Change, '53 to '54:	-1.9	-2.7	-5.4	-7.6	+1.8	-2.0

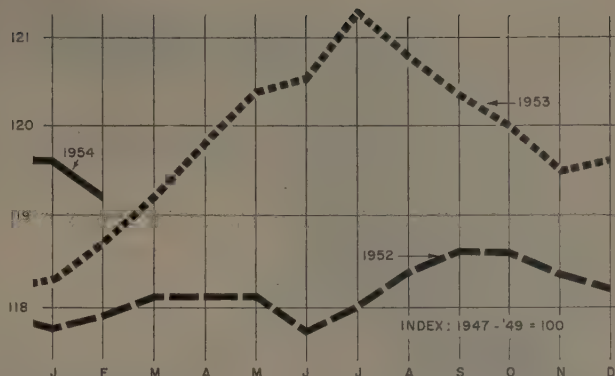
Source: Federal Home Loan Bank Board

FHA AND VA APPLICATIONS



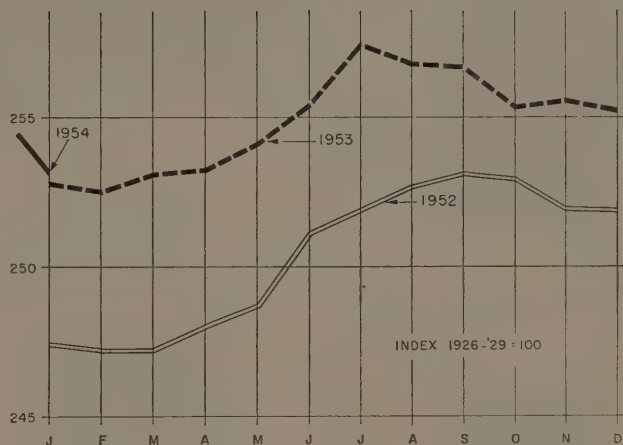
VA appraisal requests in February jumped to 34,943—75% over January and the highest month on record. Principal cause: easier mortgage money (see p. 47). FHA insurance applications for new dwelling units rose slightly, to 25,703.

MATERIALS PRICES



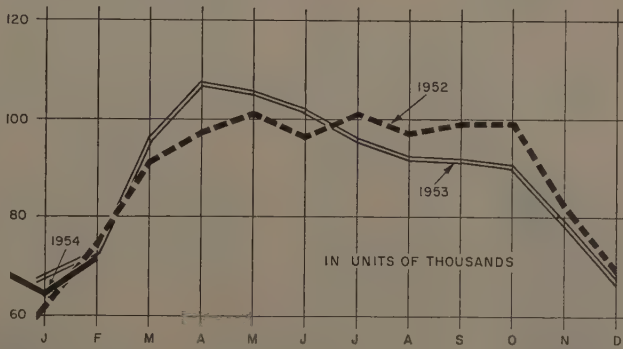
Average wholesale building materials prices calculated by BLS edged down in February to 119.2, well under a revised figure for January of 119.6. The move broke a two-month stalemate (the revised January figure was exactly that for Dec. '53). By all indications the index would undercut last year's level in March or April.

RESIDENTIAL BUILDING COSTS



E. H. Boeckh & Associates' index of residential building costs dropped 0.8% in January to 253.1, down from 255.2 in December. The move brought the index close to 1953's low for the year (in February).

PRIVATE HOUSING STARTS

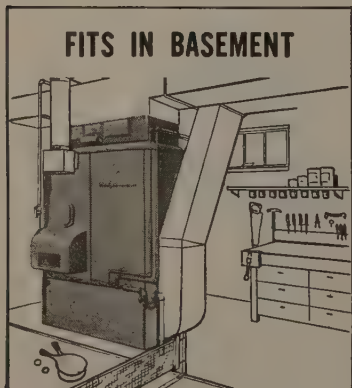
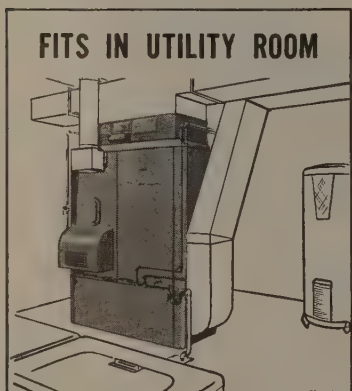
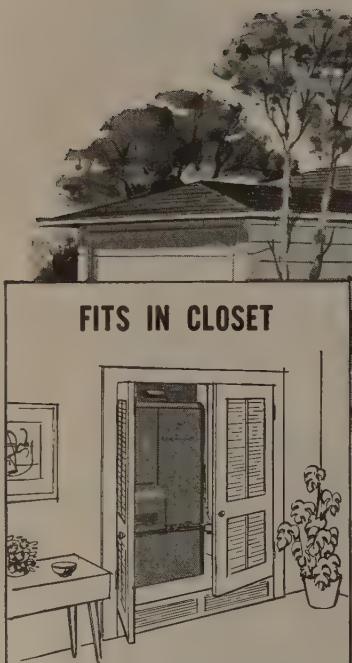


Private nonfarm dwelling units started in February totaled 71,800, the first upturn after nine months of decline. First two months' total for '54 was 136,500, only 5,500 behind 142,000 for the same period in '53, according to BLS estimates.

EXTRA COMPACT YEAR ROUND FRIGIDAIRE CONDITIONER

... provides both heating and cooling in a

single unit no larger than many furnaces alone!



Now add "One Temperature Home" sales appeal to any building plan you have

Imagine... a year 'round conditioner so compactly constructed, it can be installed even in a closet! Frigidaire brings you this marvel of engineering, a low-cost packaged combination cooling-heating plant that offers you the potent selling advantage of a "One Temperature Home"! And coupled with the appeal of automatic heating and summer cooling is Frigidaire's matchless reputation for quality, performance and dependability.

The Year 'Round Frigidaire Conditioner is specially designed to fit compact present day building plans. It is so simple to install this single combination unit that installation costs are pared to a bare minimum. Further savings are made possible by its adaptability. It fits handily in a closet or utility room of the ranch-type house so popular today, eliminating the extra cost of a specially built enclosure. Even when installed in a basement, its small space requirements free a larger area for recreation or other building plans.

Available with choice of oil or gas fired heating units. Cooling power is supplied by Frigidaire's famous precision-built XD Meter-Miser Compressor, warranted for 5 years. Cushioned blower assures quiet operation. Large, efficient air filter screens out dirt, dust and pollen.



Year 'Round Frigidaire Conditioner—46" wide, 25" deep at base, 76" high. **Voltage**—230, 60 cycle, Single Phase; or 220, 60 cycle, Three Phase. For complete details see the Frigidaire catalog in Sweet's File, or call your Frigidaire Air Conditioning Dealer—or the Frigidaire Distributor or Factory Branch that serves your area. Or write: Frigidaire Dayton 1, Ohio. In Canada, Toronto 13, Ontario.



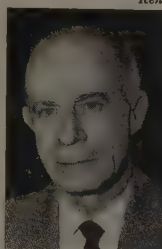
Frigidaire Conditioners

BUILT AND BACKED BY GENERAL MOTORS

PEOPLE: Curt Mack quits FHA to head mortgage firm;

Jim Lash fired as San Francisco redevelopment chief

The man whom the rank and file of builders away from Washington often regarded as "Mr. FHA" resigned last month. **Curt C. Mack**, 56, assistant commissioner in charge of underwriting since 1944 and FHA staffer for six years before that, left to become president of the S. L. Hammerman Organization, Inc., Baltimore mortgage and property management firm and correspondent for *NY Life*. Mack's departure was the top move in a shakeup of key FHA executives (see col. 3) being engineered by Commissioner **Guy Hollyday**—partly on his own motion and partly at the behest of the Republican National Committee.



MACK

Mack started in real estate in his home town of St. Louis in 1919, operated his own company for a while and gained a variety of experience in the realty field. He was vice president of Lawyers Title Co. of Missouri, served with the HOLC and RFC for a time, lectured widely and gave realty courses. He brought these hard-working, peripatetic habits to FHA, set a new record for getting out of the home office to meet FHA men, builders and lenders in the field. He was a good enough talker so that he rarely said more than he meant to, although his apparent frankness sometimes made former HHFA and FHA Chief **Ray Foley** uneasy when Mack spoke in public. This talent enabled him to remain a jovial and pithy court of appeal for builders with valuation problems while at the same time he exerted a cautious (and unapparent) resistance against being pushed further than he wanted to go.

Mack is primarily an appraiser and mortgage man; he felt FHA should lag a bit in accepting new methods and techniques. There are those who think he went too far in fighting rear-guard actions and that he made FHA more rigid than necessary. In any case, his influence was large, because after 1944 he had FHA's technical and land planning divisions under his wing in addition to underwriting (observers think the two divisions will soon be cut apart again). Mack's defenders—and there are legions of them—insist that it took an artful dodger like him to keep FHA out of hot water, that FHA needed a firm underwriting hand to level off the wartime build-or-bust program and that Mack had it. Without him, the 608 program might well be in more trouble today than it is. Not even the grapevine had any reliable word who his successor might be—or when.

Baltimore Mortgage Banker **James W. Rouse** and 14 other associates bought out Partner

Hunter Moss' interest in Moss-Rouse Co., purchased the mortgage department of Piper and Hill and christened the new firm **James W. Rouse & Co.** Moss, retaining the appraising end of the old company, will be a director of the new firm.

As expected, **Wallace Moir**, vice president of the Mortgage Bankers Assn., is due for nomination this month to succeed **William A. Clarke** as president next year. For vice president, indications were that MBA's choice would be **Lindell Peterson**, president of Chicago Mortgage Investment Co. Peterson is a past president of the Chicago MBA—the largest local association of the organization—and has been an important man in the educational program on the national level. He received MBA's distinguished service award last year for his work heading up the educational program.

His political bosses finally got rid of **James Lash**, San Francisco's redevelopment director, on March 2. The action "set the city's redevelopment program back five years," according to one official, touched off protests from at least seven reputable civic and professional organizations, directed renewed animosity toward Mayor **Elmer Robinson** and brought the redevelopment agency—on the technical side—to a state near impotency. The public servants who fired Lash—he had been director of the agency since it was set up in 1948—were four out of five of its members: **Paul T. O'Dowd**, a private detective; **Lawrence Palacios**, a laundry union official; **Optometrist J. J. Hayes**, and Attorney **Fitz-Gerald Ames**. **James Stratten**, recreation worker, voted against the ouster. He had defended Lash at name-calling meetings earlier in the year: "I think he's done a difficult job well. And how can a man do a good job when all the time he's being threatened and harassed by members of this agency?"

Aside from ordinary harassment, O'Dowd's big move was to announce that Lash had withheld a memo from FHA estimating what the agency might expect from proposed sale of land cleared for its \$50 million Western Addition Redevelopment. The estimate was \$1.8 million less than what the city's real estate department had figured. Lash said it was a tentative report and subject to change. O'Dowd, after calling him a liar at a February meeting, presented his charge to agency members at a closed-door meeting and Lash was fired, 4-to-1, in 15 minutes.

Three technical staffers of the agency—the chief planner and two assistant planners—resigned in protest. Public statements protesting the firing came from the Real Estate Board, the Chamber of Commerce, the Junior

Chamber of Commerce, the northern California chapter of AIA, the Planning and Housing Association, the board of supervisors (San Francisco's governing body) and the League of Women Voters. The supervisors invited the Redevelopment Agency to attend a meeting and explain. The agency refused and the supervisors were told by the city attorney that they did not have a legal right to pursue the matter further. But a county grand jury was considering the case. Mayor Robinson, meantime, who has repeatedly named friends and family to staff jobs in the agency, named **Robert J. Dolan** to fill Lash's place. Dolan, chief assistant clerk of the board of supervisors, is a trained lawyer but has no housing experience at all. The mayor also explained that the firing of Lash was really none of his affair. The *San Francisco Chronicle* disagreed. "The mayor," said an editorial, "has joined in a work of sabotage. . . ."

Further turnover in HHFA and FHA personnel was led by the resignation of **Jacob L. Crane**, assistant to the administrator in charge of the international housing staff. Crane, who has been in federal housing jobs since 1938, will return to private engineering practice in Washington. His resignation was seen by Washington observers as indication that the international program might be in line for liquidation or transfer to Harold Stassen's Foreign Operations Administration in line with recommendations of the President's housing policy committee. Until a successor is named, Crane's second in command, **B. Douglas Stone**, was to be in charge.



CRANE

Other changes: **Edmund B. Chapman Jr.**, FHA director in Kansas, was named assistant to Commissioner Hollyday to replace **Edgar McIntosh**, who resigned to enter the insurance field (H&H, March, '54, News). **Spencer Finney** will succeed Chapman; **A. Harry Kendall** was named FHA director for New Hampshire, to fill a position left vacant by the death of **William F. Baker**; **Berry Vaughan** was named director of the FHA insuring office in Lubbock, Texas, succeeding **J. F. Matchett**; **Hardy A. Sullivan** was appointed director of the insuring office in Tampa while his predecessor, **William F. Keehan**, became assistant director of the office; **Virgil P. Reimer** was named director of FHA's insuring office in Juneau, Alaska.

Heartened by previous court successes (H&H, Aug. '53 News, *et seq.*) Los Angeles Designer **Cliff May** and his associate, Architect **Chris Choate**, filed a \$500,000 damage suit in federal district court against another group of alleged infringers. Principal defendants: Los Angeles Architect **William M. Bray**, AIA, Builders **William Curlett** and **Jay C. Beesemyer**



9 houses sold in 12 hours!

Opening day crowd of 10,000 swarms through Memphis' first Carrier air conditioned Weathermaker Homes

"Carrier is several years ahead in the field of residential air conditioning," Builder Kemmons Wilson says. "We know because we made a thorough investigation of seven nationally known brands before deciding on the Carrier Weathermaker. The public was enthusiastic!"

They started coming at 9 that brisk December morning; they were still coming right up to 9 that night. In the hours between, Builder Kemmons Wilson sold 9 homes at \$17,500 to \$18,600.

What did the buyers get for their money? Four bedrooms, two full baths, a separate dining room and 100% Carrier air conditioning. That's value enough, but they got more! Let the brochure tell the story:

"The Weathermaker Home is a house built around air conditioning. Because it

is built around air conditioning, it has freed the architects and builders from old-fashioned barriers to good design. The Weathermaker Home is built from the inside out, a house that lets people live the way they want to, a house that begins with comfortable space and no restrictions."

That was the idea and Architects William W. Bond and Robert J. Adams really put it to work. The four floor plans they designed are actually planned around people. They have a "mother-in-law" plan with

two separate bedroom wings, a "keeping room" house with a combination dining room, a "large family" plan!

Add to the essential value of these houses the seasoned promotional touch provided by Carrier public relations experts, and you should know why Carrier air conditioned houses sell! Or to put it another way, Carrier air conditioning sells houses . . . so why not let it help you sell yours? Mail the coupon or see Sweet's Catalog, Light Construction File, 7c.

air conditioning
refrigeration
industrial heating

Carrier

CARRIER CORPORATION, 313 S. Geddes Street, Syracuse, New York
I want my next houses to be Carrier air conditioned Weathermaker Homes!

Name _____
Street _____
City _____ State _____

and two Curlett and Beesemyer construction and sales corporations developing a project known as Bristol Manor in Santa Ana. The complaint claimed that after Curlett and Beesemyer were denied a license to erect May houses last spring because the territory already was allocated to another man, the two builders "surreptitiously and systematically appropriated [May & Choate] . . . intellectual productions" and retained Bray to copy them. May & Choate sought temporary and permanent injunctions against use of their ideas in Bristol Manor houses; \$250,000 actual damages; \$250,000 for exemplary and punitive damages; copyright infringement judgment of not less than \$250; surrender of "copied" drawings and costs.

Replied Curlett, on behalf of all defendants: "... We have not reproduced in any manner Cliff May's so-called ranch house homes." He said the group was preparing a counter claim, intended "to carry this fight through as an individual example so that this practice [of bringing lawsuits] will not spread."

Beefing up its urban redevelopment division, HHFA hired a new deputy director—the nation's second most important redevelopment post. He is **Richard Lewis Steiner**, who has been director of the Baltimore Redevelopment Com-



STEINER

mission since it was created in 1946. A Yale engineering graduate with an MA in city planning from MIT, Steiner was a public housing project planner from 1938 until World War II, from which he emerged a Navy lieutenant commander. Some rehabilitation experts, remembering Steiner as a foot-dragger during the early days of the Baltimore Plan for slum repair, hoped his confinement to public housing and redevelopment would not obscure his broad view of urban renewal—the new antislum concept.

John E. McGovern, director of the old-guard FHA office in Los Angeles—one of the three largest in the country—announced he would retire, effective June 18. He had been director since 1943, weathered a number of things, including an onslaught by frustrated architects three years ago declaring the Los Angeles office a prizewinner among stick-in-the-muds. No successor had yet been named.

Gov. Goodwin Knight of California appointed a state board of landscape architects to regulate the profession. (California is the first state to enact a law providing for licensing of landscape architects; after July 1 applicants will be required to take a written examination.) Named: **Raymond E. Page** of Beverly Hills; **George C. Huntington** of South Pasadena; **Lynn M. F. Harriss** of Oakland; **Harry W. Shepherd** of Berkeley and **Jack W. Evans** of Los Angeles.

Easier money market brings flood of funds for GI loans; premiums reappear in NY

"Last month I had to go out to the Midwest to call on my correspondents. Since 1949 they have always come to call on me." That comment, by a New York City insurance company loan officer, reflected the big change in the mortgage market as spring came.

Last April, homebuilders and lenders were beseeching the administration to ease the drought in funds for FHA and VA mortgages by raising VA 4% and FHA 4½% interest rates. They finally were boosted to 4½% on May 2. This spring, the shoe was on the other foot. Many lenders were beginning to accumulate funds faster than they could invest them, were growing concerned with the prospect of paying premiums for mortgages and the possibility the FHA and VA rates might break below 4½%. Signs of steadily easing mortgage credit:

► Builders in more and more areas could get 100% GI mortgages with 25 and 30 year amortization. Former MBA President Milton T. MacDonald told a New York meeting that Metropolitan Life was taking 100% 25-year GI loans.

► Appraisal requests to VA covering new and proposed dwelling units jumped to 34,943 in February, the highest monthly figure on record (p. 43).

► From coast to coast, the prices builders received for FHA and VA mortgages were moving closer to par or better (see table). New York City lenders were wooing local Long Island builders. One lender paid a tract builder a 1% premium for his mortgages, and no commission to anyone. (In Boston, some high-grade conventional mortgage loans were bringing only 4¼%.)

► A number of insurance companies were selling government bonds to buy mortgages while they still could get them at attractive terms. Such dumping had been uncommon

since the Treasury-Federal Reserve accord unpegged government bonds three years ago last month.

► Minor signs: in Cleveland, Equitable Life agents were distributing letters to homeowners inviting them to refinance their mortgages on easier terms. In Wichita, Kan., the Union National Bank started a salesmen's training program so it could launch a doorbell ringing campaign to find new credit outlets.

Unemployed money. What caused the rising tide of money was a drop in new capital financing requirements without any marked decrease in the rate of new savings and repayments that had to be re-invested. Although new bonds of all types offered publicly in January and February totaled \$1.4 billion, compared with \$1.3 a year earlier, new stock issues were only \$67 million, compared with \$159 million for a year ago. At the same time, assets of insurance companies rose to \$5.2 billion in January, a 7.1% gain over January 1953; deposits in mutual savings banks were \$1.7 billion, or 7.7% more than a year earlier.

Under the circumstances, why did the Treasury not renew its efforts to spread the national debt over a greater maturity with a new long-term bond issue which would soak up the surplus credit? Answer: it refrained on the advice of the President's Council of Economic Advisers, which felt that as long as a recession threatened it was better to keep financing easy to stimulate job-producing investments. As money grew cheaper, mortgage yields grew more and more tempting.

Booming VA business. Around New York City and Philadelphia, mortgagemen told HOUSE & HOME editors of many a VA

MORTGAGE MARKET QUOTATIONS

(Originations quoted at net cost, secondary market sales quoted with servicing by seller.)

City	FHA 4½'s		VA 4½'s		FHA 4¼'s		VA 4's	
	Originations	Secondary	Originations	Secondary	Originations	Secondary	Originations	Secondary
Boston: local	par-101	a	par-101	a	a	a	a	a
Out-of-state	a	97-98½	a	97-98½	a	a	a	95
Chicago	96-97½	98-99	96-97½	98-99	a	a	a	a
Denver	97½-par	97½-par	97½-par	97½-par	a	a	a	a
Detroit	96¾	a	97¾	a	a	a	a	a
Houston	98-par	98-par	97-99	97-99	a	a	a	95
Kansas City	96½-97½	98-99	96½-97½	98-99	a	a	a	a
New York-New Jersey	par	99	par	99	97½	94		
Philadelphia	98-par	98-par	98-par	98-par	a	a	a	a
Portland, Ore.*	97½-99	97½-99	97½-99	97½-99	a	a	a	a
San Francisco	par	par	98-par	98-par	98	96		

* No market.

* Also indicative of rest of Pacific Northwest.

► Servicing released by originator to purchasing bank.

SOURCES: Boston, Robert M. Morgan, vice pres., Boston Five Cents Savings Bank; Chicago, Maurice Polak, vice pres., Draper & Kramer, Inc.; Denver, C. A. Bacon, vice pres., The Title Guaranty Co.; De-

troit, Robert H. Pease, pres., Detroit Mortgage & Realty Co.; Houston, Donald S. McGregor, exec. vice pres., T. J. Bettes Co.; Kansas City, Byron T. Shutz, pres., Herbert V. Jones & Co.; New York, John Halperin,

J. Halperin & Co.; Philadelphia, Robert Irving, exec. vice pres., W. A. Clarke Mortgage Co.; Portland, Franklin W. White, pres., Securities, Inc.; San Francisco, William Marcus, senior vice pres., American Trust Co.

4½% loan for 30 years with no cash or as little as 5% down. As the tide of funds spread south and west, Miami, Houston, Denver and Portland, Ore., also reported 25- and 30-year veterans loans without any down payments. In Chicago, Kansas City, and San Francisco 5% to 10% cash GI loans were common. Items:

▶ Southeast Florida's first project since 1950 with 100% GI loans was Myrtle Grove, a tract of 1,100 three-bedroom houses from \$9,400 to \$11,000 started last month by the Rood Construction Corp. of Miami. Qualified vets could buy these houses, plus any or all of nine nationally-advertised electrical appliances, on 30-year, nothing-down terms.

▶ In Portland, Ore., Builders Douglas Lowell and Ed McClellan planned to open their McKel Homes project on March 14, offering 126 three-bedroom \$10,000 houses modeled on a Stern-Price development at Cupertino, Calif. All a veteran needed, on a 30-year 100% mortgage, was \$125 for closing costs. A week before they could show the model, 110 of the houses were sold. With insurance companies rushing back into the Portland GI market, some after an absence of three years, the local VA office was having its greatest boom. Nine builders had 497 GI houses under construction last month, 11 others proposed to build another 909. GI lenders included the John Hancock, Sun, and the Penn, Pacific Mutual and Northwestern Mutual life insurance companies. Builders were paying discounts of 1%, compared with 5% last year.

As they shoved out cash, lenders winced at the terms. At an MBA conference in Chicago, Second Vice President R. Manning Brown revealed New York Life Insurance Co.'s experience with small equity VA mortgages: "During 1953 we foreclosed 69 VA loans and 61 of these had been made with no down payment. As of January 1 this year 93% of our VA loans that were delinquent were loans made with less than 5% down payment!"

Help for small towns. Two plans were under study to help get more mortgage funds into small communities where there were no tract developments and too little business to attract big secondary lenders.

One, proposed by the President's advisory committee on housing policy, called for changes in FHA and VA rules "to permit... participations in individual mortgages" by more than one lender. Under this plan a small community bank could handle negotiations and servicing on a mortgage, but sell most of it to a larger institution that would get the full FHA or VA interest rate but save on purchasing or servicing expenses.

The other, proposed by the American Life Convention and the Life Insurance Assn. of America, would create a committee to give special aid to any person who claimed he was unable to obtain an FHA or VA mortgage from at least two local lending institutions (see p. 34).

SIDELIGHTS

Washington inside

Biggest undercover fight of the month revolved around the administration's closely held plans to reorganize HHFA. In one draft of the reorganization (which will be subject to Congressional veto but not to amendment), the Home Loan Bank Board retained its semi-autonomous status under the top housing agency, but FHA was put under command control of the HHFA boss. Upshot: seriously ruffled feelings at FHA. Knowledgeable sources are divided over whether the White House will send the HHFA reorganization to Congress before the housing bill becomes law. Delay gives the administration more leverage in persuading industry groups to agree to its propositions.

Better fix-up statistics

Plans were afoot in Washington for the Bureau of Labor Statistics and Commerce Dept. to submit a \$900,000 supplemental budget request to the Budget Bureau to let them repair weak spots in the nation's construction statistics. Commerce would get \$600,000 to better its reporting of state and local public works and hire the Census Bureau to check on the home fix-up market—a notable gap in building figures. BLS would use \$300,000 to improve its reports on industrial and commercial starts.

Half-throttle for repair loans

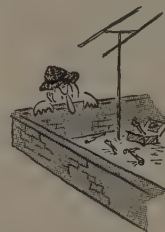
If revisions in Title I repair loans proposed in the 1954 Housing Bill become law, FHA intends to impose lower loan limits than the law allows. FHA Commissioner Guy Hollyday told the New York Mortgage and Real Estate Forum that the changes will not boom repair of homes "the way people think they will." Increased maximums from \$2,500 to \$3,000 are "not too important," he said, because the average loan is only about \$500 to \$600. But Hollyday said extension of the payoff period from three to five years "in some respects may be a little dangerous." Said the commissioner: "We'll have to have limits. Should we say that no loans under \$2,000 can have a five year payoff? Or should it be \$1,000?" In loans for repairing multiple family dwellings (the bill would permit \$1,500 per family for ten years with no limit on the number of families), Hollyday declared that a \$30,000 loan "ought to be as far as we should go." He also suggested a 2½% fee for appraising and originating costs.

Air-conditioned jail

It will, announced Servel air conditioning men proudly, be "cooler in the cooler" this summer at Olney, Ill. Air conditioning for the new municipal building will include the three-cell lockup.

Building code for TV

Now that the US has more television sets than bathtubs, building officials are casting eyes on ways of bringing TV under their regulation. Managing Secretary Hal Colling of the Pacific Coast Building Officials Conference reported an "insistent demand" from



members for an antenna ordinance. One already adopted by Longview, Wash.—and viewed with some favor by PCBOC bigwigs—requires property owners to get a \$2 permit and pay an inspection fee even if they put up their own wires.

On top of that, there is a \$1 reinspection fee if the electrical inspector has to return.

Government safety experts, checked by HOUSE & HOME, reported no record of accidents arising from television antennae, except for a few falls from rooftops. "Unless somebody can develop a background to show a need for regulation," said one authority, "the proposal looks needless."

Popcorn board?

First there was plywood, then beaver-board, gypsum board, and recently, board made from wood chips. Last month, Stanley F. Reed, 34, president of Reed Research Inc. of Washington, D.C. proclaimed the invention of a building board fashioned from wheat. To make it, he said, whole wheat kernels are puffed to 20 times their original size, coated with resins and other chemicals for weather-proofing and then compressed under heat to various thicknesses. The process, Reed admitted, is not yet fully perfected.

Antitrust trial for plasterers

In a seven-to-two decision, the Supreme Court ruled that monopoly charges against plasterers and lathers unions and employer groups in the Chicago area were subject to the Sherman Antitrust Act. The decision—which did not bear on whether or not the parties were guilty—slapped down a dismissal ruling by a Chicago district court. The Chicago court had held that lathers and plasterers were not engaged in interstate commerce and therefore were not under federal anti-trust law jurisdiction (AF, Dec. '53, News).

The Justice Dept. accused the unions and associations of suppressing competition in the Chicago area, resulting in "an unlawful and unreasonable restraint" on the flow of lathing and plastering materials from other states to Chicago. The effect of the Supreme Court decision will be to send the cases to trial again.



Imperial

Twin Pedestal—Kneehole Vanity
 Sizes: 66", 72", 84"
 Sink Available: Left or Right.
 Also with two sinks



Special

Single Pedestal Vanity
 Size: 27"
 Available: Left or Right Hand

Bathroom Glamour at Builder Prices!

...THE MOST WANTED LINE OF FORMICA VANITY-SINK CABINETS

See how much more Vanity Fair has to offer... in its gleaming, colorful beauty... in its lifetime construction... in its sensible, down-to-earth cost... in its practical, functional styles... in its ample surface room, generous storage compartments and flowing, rounded lines. Three stunning models, nine decorator colors with matching Formica mirror-front medicine chests.

Vanity Fair combines the beauty, color and utility of genuine, beauty-bonded

FORMICA

with desirable designs
 for every bathroom
 and every budget.

Available with or without
 sink and fittings.



(DIVISION OF NATIONAL DOOR CO.)



De Luxe

Single Pedestal Vanity with Drawer
 Sizes: 36", 42", 48", 54", 60"
 Available: Left or Right Hand

Write for full color brochure and prices

165 Avenue A, Bayonne, N. J. • HEMlock 6-8200



FENCES FOR PRIVACY AND AN EXTRA PATIO FOR PLAY ARE FEATURES OF BUILDER DAN BODILY'S \$12,950 THREE-BEDROOM HOUSE AT NILES, CALIF.

BUILDERS AT WORK:

Two-patio house for \$12,950

Last summer, Builder Dan Bodily put up 18 "preplanned-for-merchandising" houses at Niles, Calif., near the fast growing commercial-industrial complex along the southeast shore of San Francisco Bay. Architect Herbert T. Johnson designed him a three-bedroom, 1½-bath house (see cut) with an open floor plan, large glass areas and clerestory windows. On 7,200 sq. ft. lots, each house had two patios, one off the living room, the other on the opposite side of the house as an extra play area. Landscape Architects Eckbo, Royston & Williams gave each house an individual garden, front lawn, at least one tree, and a rustic fence for privacy. Price, including lot, was \$12,950—\$3,250 cash, and an FHA mortgage. All 18 were sold in two weeks, and another 100 would-be GI purchasers were turned away. With financing for 95% VA mortgages lined up for his 1954 construction, Bodily expected to start another 155 houses of similar style this month in Niles. Price: from \$12,500-15,000, including an extra family room.

New twists for Homes Parades

Milwaukee's Parade of Homes was creating an unusual cooperative by-product this year: a 200-acre master development of more than 500 houses and apartments, a shopping center and a school site. Because of high costs and scarcity of good development land, the Milwaukee Builders' Assn. bought a 160-acre tract when it selected its Parade site (later enlarged it with an adjoining 40 acres). The acreage not required for the 50 exhibit houses in the Parade was sold on a nonprofit basis to 45 different members for subdevelopments of \$13-25,000 homes and more than 200 garden apartments and duplex rental houses. Eight builders have started their individual projects, and the entire development, identified collectively as the Milwaukee Builders' Assn. Wildwood Estates, will be completed in about a year. The Parade was advanced from Sept. to Aug. 8-15, to allow a longer post-Parade selling season. A design committee will review plans for all houses and assign them to the lots they must

be built on, to avoid getting houses of incongruous style or size too near each other.

Houston's Home Builders also recognized the after-problem arising from high and low cost houses built near each other for Parade exhibition purposes, but dealt with it another way. This year they will divide their show into four separate sections, in different weeks and different locations. Tentatively, \$7-10,000 houses will be paraded the week starting Sunday, Sept. 19; the following week \$10-15,000 homes; the third week houses priced \$15-20,000, and then a fourth and final parade the following week for dwellings costing over \$20,000.

Price appeal reveals prospects

"There are simply one awful lot of buyers who are still hiding, and a really low-priced house seems to flush them out." Such was the conclusion of Fort Wayne Builder Ralph Shirmeyer, after he had advertised National Homes's \$6,000 Cadet. After his first ad he received 150 calls, and 100 prospects left their names and addresses. Of these, six promptly ordered \$7,325 Pacemaker models by National. "Instead of hurting medium-priced sales," said Shirmeyer, "the low-priced Cadet actually boosted this market."

House on stilts

In Olympia Fields, just south of Chicago, Telander Bros. Inc. was building an "upside-down expandable" house designed by Architects George Fred Keck and his brother William (see cut). The open-plan upper level had three bedrooms in an area of 1,470 sq. ft. It was designed around a utility core consisting of a skylighted kitchen and two baths. This core was directly over a ground-level utility room housing heating plant, laundry and a third toilet.

The Kecks estimated the flat-roofed house would cost about \$28,000, excluding land, because it contained many custom features. They doubted FHA would approve it, especially with its interior kitchen, and did not plan to seek FHA or VA financing. Main advantage of the stilts, they said, was flexibility for fu-

ture expansion. By closing in the ground level, the owner could get a garage, recreation room, study or extra bedroom. In fact, the Kecks had a slightly smaller model on the drawing boards for a real estate man, who intended to finish the ground level for his office.

\$35 million Philadelphia job

An 85-acre estate in fashionable Chestnut Hill, a northwestern Philadelphia suburb, was sold by Temple University last month to a syndicate headed by Mayer I. Blum, in cooperation with Peoples Bond & Mortgage Co. The buyers planned a \$35 million residential and shopping-center development including 27 acres of large single-family houses on one-half and one-third acre lots, 46 two-story garden apartments and six high-rise apartments.

San Diego keeps on growing

In San Diego, Builders Louis Burgener and Carlos Tavares trimmed sail to avoid over-extension and to strengthen their financial position. From their big Clairemont tract, where more than 5,600 homes have gone up since San Diego's 9,000-unit defense housing program was launched (H&H, Nov. '52), they sold 2,500 lots to the Aldon Construction and Del E. Webb Construction Companies. The Aldon-Webb combine said it will build \$30 million of \$13,000-\$19,000 nondefense homes and a 50-acre, \$5 million shopping center on the property. They were already partners in building a \$20 million community for the San Manuel Copper Co. near Tucson, Ariz.

Burgener and Tavares said they retained an unspecified "interest" in the two Aldon-Webb Clairemont projects, and also would continue other operations of their own there, including 466 new dwelling units this year. They still

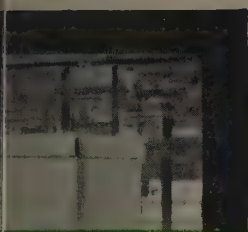
continued on p. 54



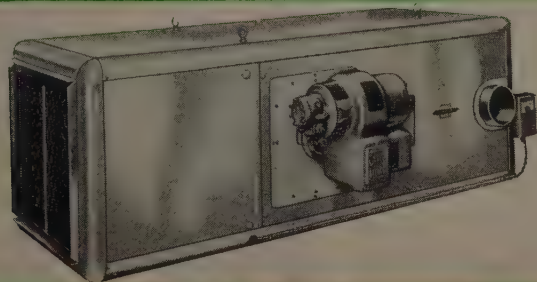
KECKS'S UPSIDE-DOWN EXPANDABLE HOUSE

Builders Heat

Methods
Quality!

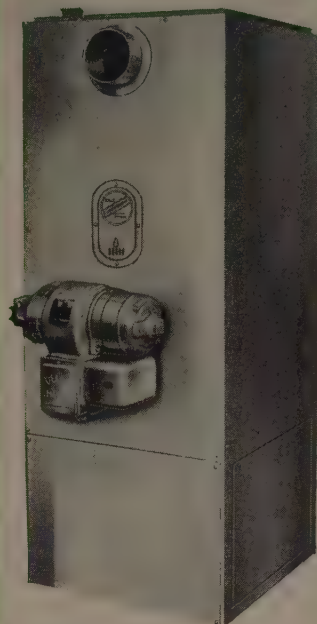


New, modern, spacious Delco-Heat plant at Rochester, N.Y. assures you a steady supply of Delco-Heat units.

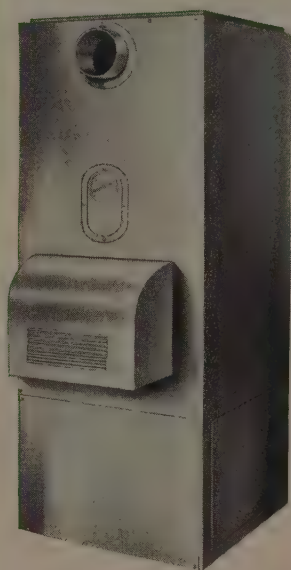


Compact new horizontal Delco-Heat unit—Model OPC 75Z—for space-saving installations. Suspend from overhead joists or support in blocks in crawl space. Capacity 75,000 Btu

per hour output. 72½" long by 25" square. Delco coordinated controls and stainless steel Quik-Action Heat Transmitter for better combustion and cleaner flame.



New, compact oil fired "builder model" offers new low prices for project sales! Value leader Model OBC 75H is a Conditionair package unit with 75,000 Btu output. Designed for space-saving installation. Features exclusive Delco wrap-around design, steel cabinet and Circle-Air Radiator that adds extra heating surface—improves efficiency. Other Delco features are Quik-Action stainless steel combustion chamber, Delco-Heat Pressure Oil Burner powered by vibration-free Rigidframe Motor, Centrifugal Blower and replaceable air filter. Low models, and reverse flow models for perimeter heating also available.



Sensational new 90,000 Btu addition to Delco-Heat line of gas fired Conditionairs—Model CBC 90H. Compact, only 25"x25"x67", to meet today's building needs. AGA approved for minimum clearance closet and alcove installations. Low and counterflow gas Conditionairs also available.

Delco Heat

For a good deal—deal with Delco!

... a complete line of automatic oil and gas fired conversion burners; Conditionair forced warm air furnaces, heating, cooling units; boilers; water heaters; electric water systems.

hold sites for apartments, a medical-dental center, a motel, eight service stations, and an area suitable for about 500 \$15,000-\$25,000 homes where they will build for individual buyers or sell sites to other builders.

Nonwhite housing started

With a pledge for financing from the Mellon Bank, the Home Builders Assn. of Metropolitan Pittsburgh launched a program to build houses for the city's nonwhite market. President A. M. Rearick and eight other HBA members formed Private Housing, Inc., a non-profit organization, and put up \$100,000 to begin building at least 25 this year. Houses will sell for \$11-15,000 on regular FHA Sec. 203 mortgages, said Rearick, who also heads the new building organization. No specific financing amount was promised by the Mellon Bank, he added, but it was understood it would underwrite 200 or 300 houses. It may not be necessary to depend entirely on the bank for financing, said Rearick. Additional funds were provided for some of the first units by Housing Mortgage Corp. Other HBA members in the program: Theodore A. Rauch, C. F. McWilliams, Calvin D. Crawford, Roland Catarinella, Russel P. Miller, Franklin B. Wimer, Stephen E. Kovach Jr. and Harold Sampson.

In Indianapolis, Barrington Manor, a 500-unit rental apartment project for Negroes, was under construction with first units scheduled for completion next month. The first section of 21 two-story frame buildings costing about \$1.2 million will contain 168 two-bedroom units averaging 673 sq. ft. each. Rent: \$64 to \$66 a month including refrigerator, water and automatic gas heat. To produce greater floor space, Engineer Paul Cripe designed the units with enclosed exterior stairs. Leo A. Lippman's L & L Building Corp. was erecting the project with permanent financing on an FHA Sec. 207 mortgage to be sold to Fanny May.

Pulse of the market

Charles Associates, Inc. of Cincinnati bought a 40-acre tract owned by Bucknell University in South Alexandria, Va., just outside Washington, and planned a group of 130 houses in the \$17-22,000 range. . . . Chicago Homebuilder Ben Sears bought a 200-acre tract in Skokie for 523 houses in the \$21-25,000 range being designed by Architect Peter Zirol. . . . Reginald T. Watson's Gulf Construction organization was ready to start building 450 four-bedroom houses in Westwood Village, Massapequa, L.I. Watson sold the first section of 256 at \$12,490 each in one week last October, put the remaining 194 on sale in February. . . . Westchester County's Carnoy-Wolter Construction Corp. bought 150 acres in Mt. Marion, N.Y. for a shopping center and a 600-house project for workers at a new IBM plant nearby. . . . In Parma, rapidly growing Cleveland suburb, Builders H. L. Miller and T. Robert Trebbe started 25 semicustom-built contemporary houses at \$26,000 and up, designed by Architects Robert A. Little & Associates and Clyde A. Patterson Jr.

House appropriations committee votes more tax breaks for owners selling their homes

In 1951 Congress eased income taxes on home owners who sold their houses at a profit: it exempted the profit from taxation if it is reinvested in another house up to a year before or after the sale.

Last month, the ways and means committee, in reporting the 1954 tax revision bill to the House, recommended more tax breaks along the same line. The new proposals could help homebuilders arranging trade-in sales. They might be useful also in rehabilitation projects. The committee proposed that any profits of a home seller that were taxable could be reduced by 1) the commission paid to sell the house, and 2) fix-up expenses for making the house salable, including painting, papering and landscaping, if incurred within 90 days before and paid within 30 days after the sale.

Subdivision rules. The committee urged two other tax changes that might help small homebuilders and some realtors. One would guarantee capital gains privileges, rather than regular income tax rates, when a tract owner, except a dealer in real estate, subdivides a tract by selling no more than five lots a year, and, unless he had acquired it by inheritance, had held the tract at least five years without making any substantial improvements on it.

The other change would let a real estate dealer pay only capital gains taxes on investment property he held for his own account, provided: 1) he listed it with Internal Revenue as an investment purchase within 30 days of taking title (within 90 days after the bill becomes law on property already held), and 2) he held it at least five years without making any major improvements. In this case, however, 5% of the profits would still be taxed at full income tax rates, on the theory the dealer would probably be his own broker and thus save about that amount of a business expense on commissions.

Setback for some areas. The change would be a boon in many Internal Revenue districts. Usually, revenue men have held that realty brokers are subject to ordinary income tax on profits from sale of properties held for their own account. Because their main business is real estate, their properties are classed as merchandise, not investments. But in more liberal districts like New York, where it was easier for a real estate man to satisfy federal agents that a genuine investment is involved and that his main business was not "trading" in real estate as a principal, the proposed change would raise havoc.

Henry Waltemade of the Bronx, chairman of the Realtors' Washington Committee—NAREB's lobbying arm—said he had no idea why the House committee added the "discriminatory" five-year holding provision (compared with six months under ordinary conditions). Another New York realtor said it was incomprehensible why the committee wanted to "put

a premium on preventing construction, improvements, or rehabilitation," especially when so many city properties were already run down because rent control had led to deferred maintenance. Waltemade hastily asked Congress for a chance to testify against the restrictions.

Paint contractors study how to fight do-it-yourself trend

How to fight the do-it-yourself movement was the main concern of 600 delegates to the 70th national convention of the Painting & Decorating Contractors of America in Los Angeles Feb. 23-26.

One problem was that paint contractors were caught in something of a vicious circle. Outgoing President Richard H. Bohl of Columbus, Ohio, said the shortage of journeyman painters was a big spur to the do-it-yourself trend. Buffalo Contractor Gordon McKay added that do-it-yourself growth made it harder and harder to recruit apprentices (who now replace only about 20% of retiring and dying painters). Lamented McKay: "How can we get young men to spend three years learning to be a painter when they read articles which claim to tell them all they need to know to be experts—in not over five minutes reading time?"

For antidotes PDCA: 1) issued a new consumer booklet, "Let an Expert Do It," which stresses the superiority of professional work and the pitfalls that may be avoided by employing the "know how," competence and expertness of the skilled contractor, and 2) helped organize the Joint Paint Industry Coordinating Committee to "promote the interests of PDCA, the National Paint, Varnish & Lacquer Assn. and the Retail Paint & Wallpaper Distributors of America." Advertising by paint makers that disparaged contractors is now declining, said Bohl, and the joint committee is studying ways to boost business for all three groups without touching discord among them.

Treasurer William Gelfan, head of William Gelfan & Son of Los Angeles, was elected new president of PDCA. The association claims

Kings Photo Service

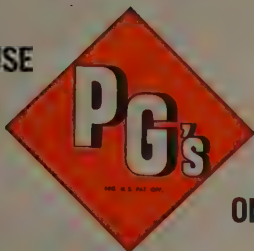


GELFAN

more than 10,000 members, most of them in the home painting and decorating field, but many engaged for maintenance work on industrial and commercial structures. Harry Helzer of Cheyenne was elected one of the four vice presidents, succeeding John W. Burns of Portland, Ore., who became treasurer. The three other vice presidents, all re-elected, were: George A. Steinheimer, Omaha; John M. Cody, Nashua, N.H. and Ray N. Elvart, Chicago.

RADIANT PANEL HEATING

USE



ON YOUR NEXT JOB



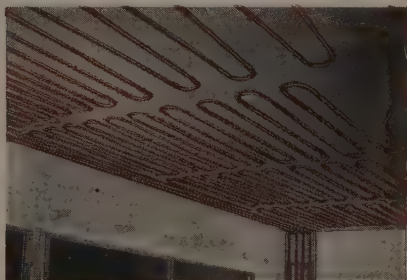
$\frac{3}{8}$ " PG's for ceilings weigh 10 pounds each and are packed 4 to a carton for easy handling or storing. Tied in a figure-8 bundle, a PG readily opens to a flat sinuous coil pattern.



Lightweight PG's are easily installed. Trim, straight grids fasten tightly to ceiling—permitting a minimum, even thickness of plaster.



All PG's are furnished with one end of the tube expanded. After cleaning and fluxing, PG's are connected by soldering or brazing. Many fittings are eliminated.



Note close tube spacing near outside wall where heat loss is greatest. Tube spacing is increased as grids are installed nearer the inside wall.

PG's—NEWEST DEVELOPMENT IN RADIANT HEATING BY ANACONDA

PG's (Panel Grids) are accurately PRE-FORMED radiant heating coils made of ANACONDA Copper Tubes for floor or ceiling installations

Radiant panel heating installations made easier, faster—and better. A large claim, but actual installations support it. Follow the photos on this page and see how a typical ceiling job can be done using PG's®.

PG's for ceiling installation are made of 50 linear feet of $\frac{3}{8}$ " type L copper tube. At normal 6-in. spacing, a PG measures 56 in. wide by 60 in. long covering an area of 30 sq. ft. But you can readily contract or extend a PG *by hand* so that the tube spacing meets *all* design re-

quirements — from 4½ in. to 12 in. centers. This flexibility means that one $\frac{3}{8}$ " ceiling PG may serve an area of 22½ to 60 sq. ft.

For floors, PG's, made of $\frac{1}{2}$ " type L copper tube, are formed to a 9 in. c-c spacing. Floor type PG's are adjustable to all c-c spacings from 6 in. to 18 in. and are easily adapted to any residential, commercial, industrial or institutional radiant panel heating installation.

Ask your Anaconda Distributor to show you how PG's can simplify de-

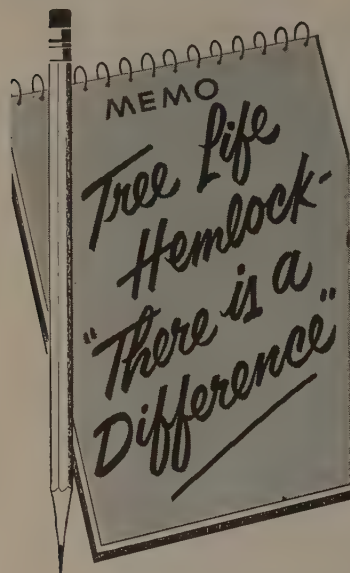
sign and installation. Or write for Publication C-6. It contains the answers to many important questions concerning this time- and money-saving new development. *The American Brass Company, Waterbury 20, Conn. In Canada: Anaconda American Brass Ltd., New Toronto, Ont.*

* Patent Applied For

6372 (Rev)

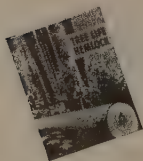
ANACONDA® 
Copper Tube PRE-FORMED Panel Grids
for Radiant Panel Heating.

Make a note!



Right! West Coast Hemlock should never, *never* be confused with Eastern Hemlock. West Coast Hemlock (*Tsuga heterophylla*) is an entirely *different* species. TREE LIFE West Coast Upland Hemlock, grown only at high altitudes on western slopes of the Cascade Mountains, is a superior wood for many uses—the finest type of Hemlock grown! Check its features!

- West Coast Hemlock is strong. Has fewer and smaller knots.
- West Coast Hemlock is uniform, relatively hard. Minimum spiral grain. Fine texture.
- West Coast Hemlock is stable, easy to work. Takes paint smoothly. NO pitch pockets.
- West Coast Hemlock is durable. Not brashy.



Write for "TREE LIFE HEMLOCK," a 20-page booklet on properties and uses. St. Paul & Tacoma Lumber Company, Dept. HH, Tacoma 2, Washington.

Specify with Confidence

TREE LIFE

WEST COAST UPLAND

HEMLOCK

ANOTHER
FAMOUS
MEMBER OF
THE TREE LIFE
FOREST
PRODUCTS
FAMILY



EVENTS

American Institute of Real Estate Appraisers, fifth annual regional conference, sponsored by chapters in New Jersey, New York, Pennsylvania, District of Columbia and Maryland, **April 2-3**, Chalfonte-Haddon Hall Hotel, Atlantic City, N.J.

Mortgage Bankers Assn., Eastern mortgage conference, **Apr. 12-13**, Hotel Commodore, New York; Western mortgage conference, **Apr. 16-17**, Brown Palace Hotel, Denver; Southwestern mortgage clinic, **Apr. 23-24**, Paradise and Jokake Inns, Phoenix; annual convention, **Sept. 27-30**, Conrad Hilton Hotel, Chicago.

Midwest Conference of Building Officials and Inspectors, eighth annual school for building inspectors, **Apr. 12-16**, Washington University, St. Louis, Mo.; annual conference and business meeting, **Sept. 20-22**, Hotel Commodore Perry, Toledo.

Western Mountain District, American Institute of Architects, annual conference, **Apr. 22-24**, La Fonda Hotel, Santa Fe, N.M.

National Savings & Loan League, annual meeting, **May 3-5**, Jung Hotel, New Orleans.

National Association of Mutual Savings Banks, annual convention, **May 10-12**, Edgewater Beach Hotel, Chicago.

Building Officials Conference of America, 39th annual conference, **May 10-13**, Bellevue Stratford Hotel, Philadelphia.

Royal Architectural Institute of Canada, 47th annual assembly, **May 11-14**, Mount Royal Hotel, Montreal.

New Orleans Home Show and Builders Exposition, **May 22-23**, Municipal Auditorium.

Architectural League of New York, "Building Your Home, 1954," public exhibition to demonstrate progress made in housing and residential architecture and in building materials, will include Carl Koch's Techbuilt house (H&H, Mar. '54), **May 27-June 6** at the 71st Regiment Armory, 34th St. and Park Ave., New York City. Trade days and hours are **May 27, 28** from 9:00 A.M. to 10:30 P.M.; **June 1-4**, from 9:00 A.M. to 12 noon.

National Housing Conference, **June 7-8**, Statler Hotel, Washington D.C.

American Institute of Banking, annual convention, **June 7-11**, Statler Hotel, Los Angeles.

New Jersey Chapter, American Institute of Architects, convention, **June 10-12**, Berkeley Carteret Hotel, Asbury Pk., N.J.

American Institute of Architects, 86th annual convention, **June 15-19**, Statler Hotel, Boston.

Aspen Design Conference, Aspen, Col., **June 23-29**. For details address Aspen Institute of Humanistic Studies, Ann Arbor, Mich.



CORBIN

Aluminum Trim Hardware

**STRONG
RUST-PROOF
AND LOW-COST, TOO!**

At no extra cost you can give your customers trim hardware with handsomer finish, superior strength, better quality! Corbin Pressure-Cast Aluminum Hardware won't rust — keeps its smooth beauty for years. Never needs painting. Far and away your best buy! Phone your Corbin dealer today.



Are you paying
more
for cheap
locks

than you'd
pay for
NEW



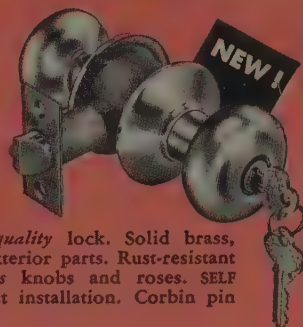
TROUBLE-FREE CORBIN LOCKS?

Corbin's two new cylindrical locks, the "Guardian" and the "Defender", are made to END LOCK COMPLAINTS and COSTLY CALL-BACKS! They give you the three things you need most—BUDGET PRICES, EASY INSTALLATION AND TROUBLE-FREE SERVICE.

Take 5 minutes to compare! You'll be convinced you get more lock for your money with Corbin. You give more customer satisfaction . . . and at the same time you save servicing time and money. See your Corbin dealer today!



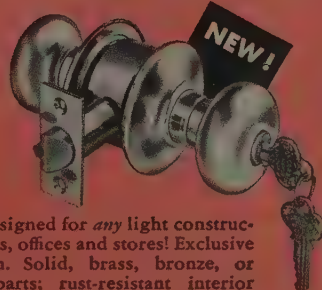
Guardian
CYLINDRICAL
LOCKS



LOWEST-PRICED, yet a *quality* lock. Solid brass, bronze or aluminum exterior parts. Rust-resistant interior parts. *Screwless* knobs and roses. SELF ALIGNING for easy, fast installation. Corbin pin tumbler security.



Defender
CYLINDRICAL
LOCKS

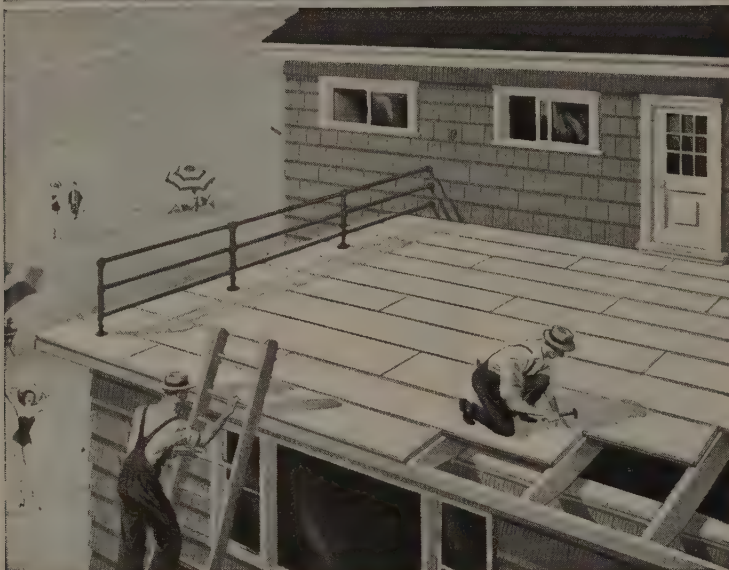


MEDIUM-PRICED, yet designed for *any* light construction such as fine homes, offices and stores! Exclusive "Velvet-Glide" action. Solid, brass, bronze, or aluminum exterior parts; rust-resistant interior parts. Fast, fool-proof installation. Corbin pin tumbler security.

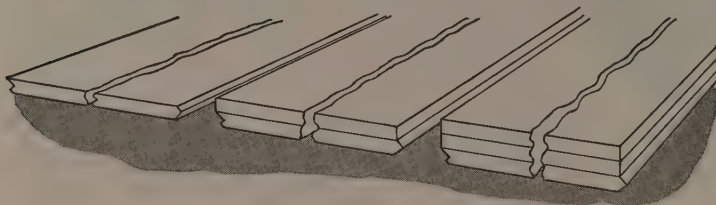
P. & F. CORBIN Division

The American Hardware Corporation
New Britain, Connecticut

For Use on Flat, Pitched or Monoslope Roofs



WEATHERPROOF HOMASOTE ROOF DECKING V-GROOVED—IN 1-, 2-, and 3-PLY SLABS



Here is the economical *new* material for use on flat, pitched or mono-slope roofs. Lightweight and strong, it is applicable to residences, churches, office buildings, commercial buildings.

Homasote Roof Decking is available in one-, two-, or three-ply slabs. While all thicknesses possess the same basic qualities, each one is designed for particular specifications. For example—the one-ply slab is applied on rafters 16" on centers; the two-ply on 32" centers; the three-ply slab on 48" centers. Thus applied, independent laboratory tests show that this material will support a live load of 75 lbs. per sq. ft. Wood or asphalt shingles, slate, ceramic or cement tiles, built-up roofing or 4" of concrete may then be applied.

In every application, weatherproof Homasote Roof Decking gives great struc-

tural strength. Its insulating value is far higher than that of wood decking. *Weatherproof and permanently crack-proof*, it affords lasting protection against moisture and mildew and has important sound-deadening qualities. The fine under surface of Homasote Roof Decking serves as the finished ceiling.

The one-ply slab of Homasote Roof Decking, 21/32" thick, is available in the 2' x 8' size and in all other standard sizes of Homasote Insulating-Building Board up to 8' x 14'. The two- and three-ply slabs are available in the 2' x 8' size. This lightweight, easy-to-handle roof decking—whether in the 2' x 8' or larger sizes—affords major savings over the methods and labor operations otherwise required. May we send you samples and literature with complete specifications? Please address your inquiry to Department 68.



HOMASOTE COMPANY

Trenton 3, New Jersey

LETTERS

MODERN MILLWORK

In its Sept. '53 issue, *HOUSE & HOME* discussed some of the problems raised by modern design of windows and doors, and the manner in which these problems affect the millwork industry.

In the course of this discussion, the magazine presented two sets of profiles for potentially standard modern millwork, inviting criticism and comment. The letters which follow are part of an avalanche of mail (about four to one in our favor), criticizing and commenting.

The article on millwork in this issue, based on these and other letters, is the second step in our program to try and find a new standard for windows and doors, to get lumber mills to produce a line of new stock millwork and lumber dealers to stock it.

SOLUTION IN SIGHT

Sirs:

Your exhaustive and comprehensive journal brings us the closest yet to a solution of the special millwork problem.

ROBERT M. LITTLE, AIA
Miami

BUMPERS AND BRUISERS

Sirs:

Building a rough structural frame then covering it up, layer upon layer, with finishing materials has always seemed wasteful of materials and labor. . . .

The use of exposed framing elements doubling as structural members produces an overall saving and better appearance.

But there are drawbacks. A structural window wall must make its appearance at the job very early and withstand the bumps and bruises of the trades thereafter. Also, thorough indoctrination of all the tradesmen is necessary because of habitual practices. It is disconcerting to find your finished frame bored full of holes for electrical conduits or plumbing lines. As a result the system may prove a loser until the crews become accustomed to your method of operation.

PAUL EDWARD TAYLOR
Long Beach, Calif.

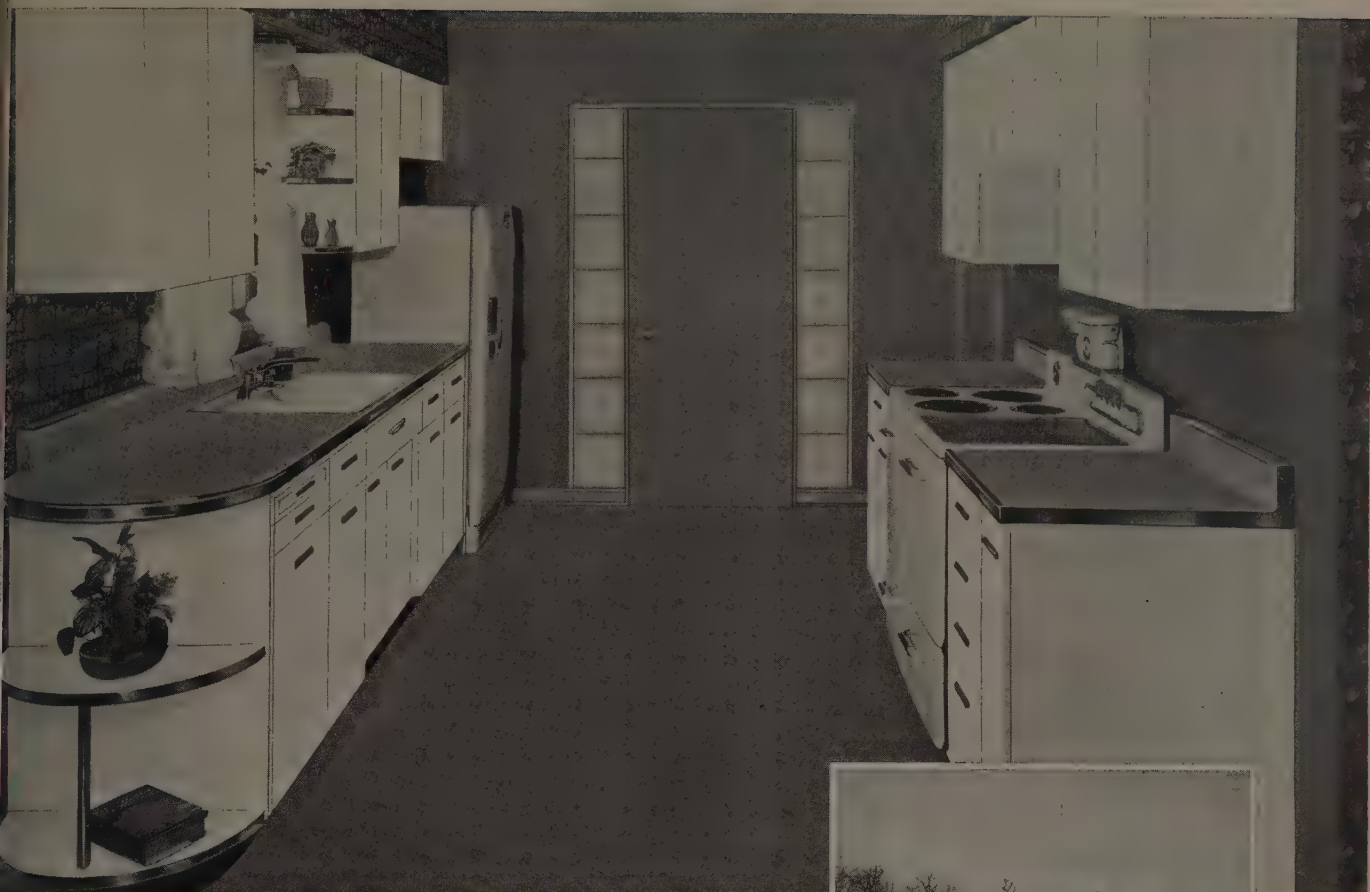
STOCK MILLWORK APPLICATIONS LIMITED

Sirs:

. . . The so-called Johansen system does not make sense to me. The millwork is not structural and is designed so that it must be installed in piecemeal, along with structural elements and in some parts only for questionable esthetic reasons.

I prefer complete windows and doors assembled in the mill that can be inserted onto a rough structural frame. We do this as a regular practice and do not find it difficult. Our tolerances between rough open-

continued on p.



Typical new home in Shrine Village, being developed by the North Construction Company of Canton, Ohio, features this two-wall Republic Steel Kitchen. Good design is exemplified by sink and range placed directly across from each other. Plenty of well-placed counter space. Ideal kitchen arrangement for smaller homes.



**"No waiting! No costly installation!
No painting! No call-backs!"**

No wonder I'm completely sold on

Republic Steel Kitchens!"

So says Fred E. Marsh, of the North Construction Company, who firmly believes quality "must be seen to be appreciated" in today's new home market. That's another big reason why he uses Republic Steel Kitchens,—to point up his "quality home" story.

Higher bracket homes built by Mr. Marsh feature Republic Steel Kitchens like this one. He also completes modest price-tag dwellings with a basic kitchen by Republic, and sells the idea of adding to it later when the prospect's budget allows.

"With many homes still to go up in Shrine Village, we're particularly enthusiastic about Republic Kitchens. There's never a call-back to fix warped drawers or sticky doors. Best of all, complete customer satisfaction helps to sell the next home, usually before it's completed."

Republic's "ore-to-store" facilities are particularly attractive for builders, from the standpoint of delivery, economy, and flexible planning of custom kitchens from stock units. For catalog, complete information, and the name of your nearest distributor write to Republic Steel Kitchens, Builder Sales, 1028 Belden Ave., Canton 5, Ohio.



Cabinets of Steel for Lasting Appeal





Facts for Builders



Smooth, even appearance



Strong, dry, weatherproof



Lightweight, applies fast



Weatherproof lap-joints



No splinters, no splits



Check-free paint surface

Harborite siding is famous SUPER-Harbord (the boatbuilders' plywood) with medium density plastic sheets permanently bonded to one or both faces. It is not new—has proved a rugged, super-quality siding on homes for over 15 years.

WEATHERABILITY—Harborite siding weathers like glass. Plastic overlays are fused to SUPER-Harbord core forever...Harborite can't come apart. The all-heartwood veneers are bonded with Harbor's original 100% waterproof glue. Regular DFPA tests prove Harborite resists boiling, baking, freezing.

STRUCTURAL ADVANTAGES—Harborite siding takes advantage of the great dimensional stability and damage resistance that results from plywood cross-lamination. It is dry when you get it, won't shrink or swell, won't split.

FHA REQUIREMENTS— $\frac{3}{8}$ "* Harborite siding applied directly over building paper on studding meets FHA requirements—saves in sheathing costs. $\frac{1}{4}$ "* Harborite meets FHA standards for application over standard plywood or lumber sheathing.

WORKABILITY—Lightweight Harborite siding is pleasant and easy to handle, free from splinters. Its fine, tight grain cuts sharp and clean. Tough plastic faces are not easily marred.

APPLICATION—Standard nailing procedures are followed. Lapped end joints* give weatherproof seal, assure even, unbroken surface. Lightweight 8' planks go up fast and neatly.

PAINTABILITY—Harborite's paint-holding surface is far superior to wood. Medium density plastic provides the near-perfect priming surface. Standard painting procedures result in finish that won't check or blister...lengthen paint life profitably.

COST—Harborite lapped siding is comparable to top quality B-and-better red cedar siding in cost. Considering strength, workability, weatherability and paintability, Harborite offers unusual economy for builders who want to build more house for the money.

***CUSTOM MANUFACTURE**—Harborite siding can be ordered in special lengths, special joint treatments and thicknesses to match your needs. Outline your problems, then get in touch with:

HARBOR PLYWOOD CORPORATION ABERDEEN, WASHINGTON

Warehouses and sales offices in Aberdeen, Atlanta, Tampa, Chicago, Cincinnati, Indianapolis, Jacksonville, Oakland, San Francisco and Los Angeles.

LETTERS continued

ings and millwork are in the order of 3/16 to 1/4".

We have not used any of the stock millwork units available on the market. The application, as far as our designs are concerned, is most limited.

However, I rather question the advisability of "freezing" standard sizes and stock frames at this time, when architects are only beginning to collaborate with the merchant builders.

HUGH STUBBINS, AIA
Lexington, Mass.

STANDARDIZATION

Sirs:

You have hit home to something dear to my heart—the standardization of window and door sections. . . .

The problem has been discussed more than once by the Technical and Materials Committee of the Southern California Chapter of the AIA.

DON MUNTZ, AIA committee chairman
South Gate, Calif.

NO LOAD ON THE MILLWORK

Sirs:

We have always been against letting the millwork carry any part of the major load. Load causes movement, undesirable in millwork that require close tolerances. . . .

We do not consider the Johansen system "structural" or "semistructural" since none of the millwork holds up any part of the frame.

ELIOT NOYES, AIA
New Canaan, Conn.

OVERELABORATE

Sirs:

We find many architects are detailing special millwork and obtaining it without a difficulty. In many cases these special details are more elaborate than they need and perhaps part of the difficulty is that architects are not well enough aware of the great potentialities inherent in the proper detailing of custom millwork.

JAMES ARKIN, AIA
Architectural consultant
Architectural Woodwork Institute
of America
Chicago

NO ALIBI

Sirs:

You are so right in making this challenge, and there is no justifiable alibi that the lumber mills, fabricators or lumber dealers can possibly make as a satisfactory answer. The normal flow of good business has almost led us to be apathetic toward the inclusion of substitute materials.

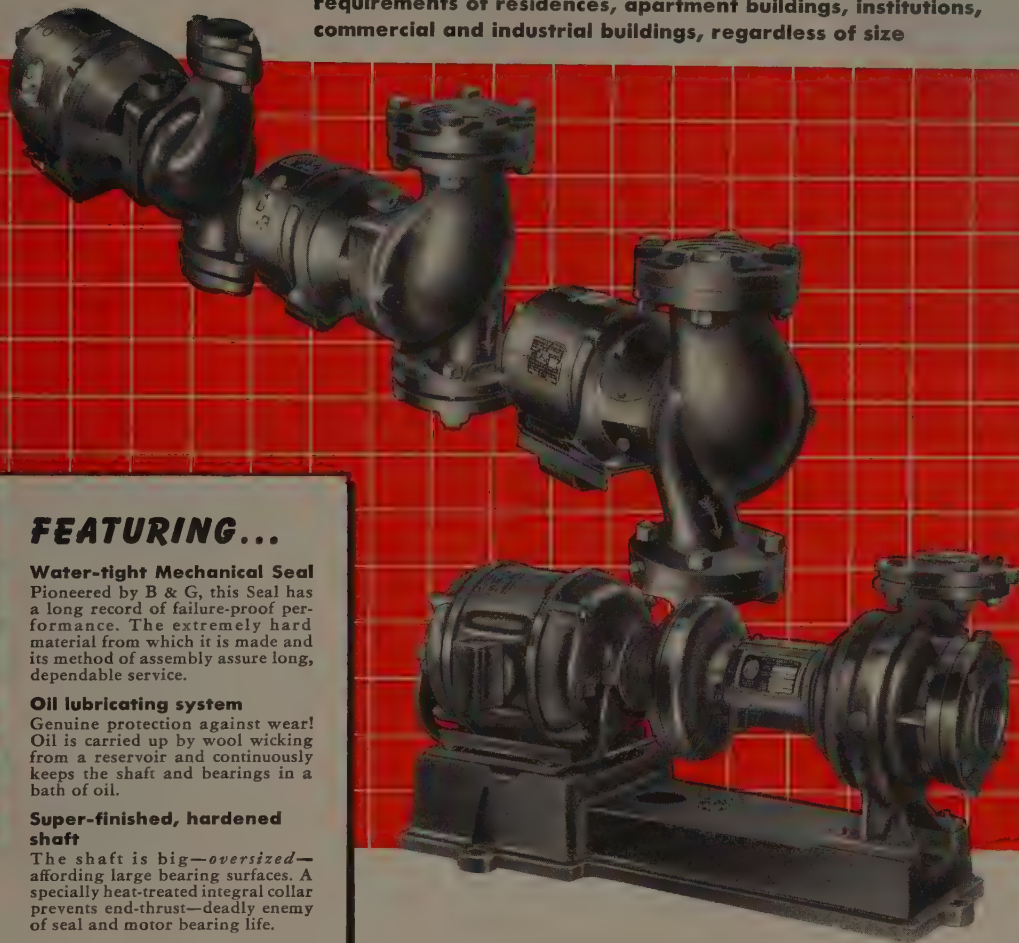
As a member of the executive committee

continued on p.

FIRST...AND ONLY

COMPLETE LINE OF HOT WATER HEATING PUMPS

Offering a range of heads and capacities which meet the circulation requirements of residences, apartment buildings, institutions, commercial and industrial buildings, regardless of size



FEATURING...

Water-tight Mechanical Seal

Pioneered by B & G, this Seal has a long record of failure-proof performance. The extremely hard material from which it is made and its method of assembly assure long, dependable service.

Oil lubricating system

Genuine protection against wear! Oil is carried up by wool wicking from a reservoir and continuously keeps the shaft and bearings in a bath of oil.

Super-finished, hardened shaft

The shaft is big—oversized—affording large bearing surfaces. A specially heat-treated integral collar prevents end-thrust—deadly enemy of seal and motor bearing life.

Quiet, spring-type coupler

The arms of the B & G Coupler are held together with springs—a design which dampens vibration and noise...so successfully it is used on all B & G Heating Pumps up to 25 H.P.

Special motors

Motors are either built in the B & G plant itself or to rigid specifications. B & G Boosters up to 1½" have smaller than usual motors—but have exactly the same capacity as previously. This motor is the first specifically designed to match the reduced size of modern boilers.

Forced hot water heating systems have expanded in application to buildings of every size and function...B & G Boosters and Universal Pumps have likewise expanded to satisfy all possible circulation requirements.

These pumps are designed and built specifically for forced hot water heating systems. In every detail, they are constructed to assure three things: First, quietness of operation...second, dependable, trouble-free performance...third, long life.

How successfully B & G Pumps achieve these goals is evidenced by the fact that more are sold than all other hot water heating pumps combined! For full information send for the B & G Catalog.



BELL & GOSSETT

C O M P A N Y

Dept. DJ-10, Morton Grove, Illinois

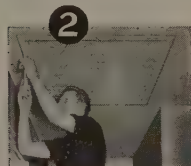
Canadian Licensee: S. A. Armstrong, Ltd., 1400 O'Connor Drive, Toronto, Canada



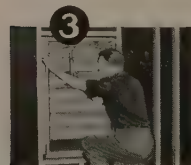
Adds appeal of Built-in Summer Comfort at Lowest Cost!



Fan and shutter arrive set up. Simply place fan over framed ceiling opening. Rubber cushion makes it self-sealing!



Complete automatic shutter unit screws to ceiling opening frame; flange forms trim. No finishing needed.



Ready-made attic louvers can be installed quickly by one man. Sizes for each of various-sized fans.

Comfort-minded house hunters buy this R & M Fan idea!

Today, most people consider coolness in summer just as important as warmth in winter. And, in everyone's mind, *complete* home cooling is the ultimate. It's easy to understand, then, why prospective home buyers will be impressed with an R & M Attic Fan! It *cools every room in the house!* Yet you can install this unit—complete with automatic ceiling shutter—for as little as \$139.95*!

Build this sales talk into your homes! Promise cool sleeping, cool living. Get selling benefits *far* beyond its low cost! Requires only 18" of attic clearance; fits narrow hallways. 5000 to 16000 CFM. Available with or without automatic ceiling shutter. Fan guaranteed 5 years; motor and shutter, 1 year. Return the coupon for a reliable guide to better comfort cooling.

*Prices subject to change without notice

ROBBINS & MYERS



ROBBINS & MYERS, INC., Fan Division HH-44
387 S. Front St., Memphis 2, Tenn.

Please send me your booklet, "R & M Comfort Cooling and Ventilating A.I.A. File No. 30-D-I."

Name

Address

City Zone State

LETTERS *continued*

of the Lumber Dealer's Research Council, would like to express to you my appreciation for the stimulating article and give double thanks for going to bat for our industry.

CRAIG RUFFIN, *vice president*
Ruffin & Payne, Inc.
Lumber, Millwork &
Builder's Supplies Dealer
Richmond, Va.

NOTHING NEW

Sirs:

... I am most sympathetic toward your over-all concept but you won't make much progress—you will not uncover any ideas or concepts that are new. This business has been worked over time and again by ambitious people (myself included) who wanted changes made.

We all eventually get back to the fact that we live in a competitive world and "reforming" is not a very profitable occupation.

HILLARD J. POTTS
Manufacturers sales associate
Millwork & Lumber Specialist
Milwaukee

HALF-GENERATION LATE

Sirs:

Congratulations on your efforts to bring millwork manufacturers forward a few decades!

It has been my observation that once a product is in production it is already outdated by at least a half-generation. I note that the millwork details you reproduced are still back in the era of window sills that we have long since discarded as being the weakest point in wood sashes. I suppose that any manufacturers can be persuaded to produce contemporary profiles, they will already be outdated when they reach the market.

In spite of all this, I heartily endorse your effort.

WILLIAM F. DEKNATEL, *Architect*
Chicago

WRONG NAME

Sirs:

... I do not think that we should think of these pieces of lumber as millwork in the old-fashioned sense because, to my mind, they must be structural in nature. The structure must be the finish if we are to achieve reasonable costs and integrity of design.

FOSTER RHODES JACKSON, *architect*
Chino, Calif.

NO FINAL ANSWER

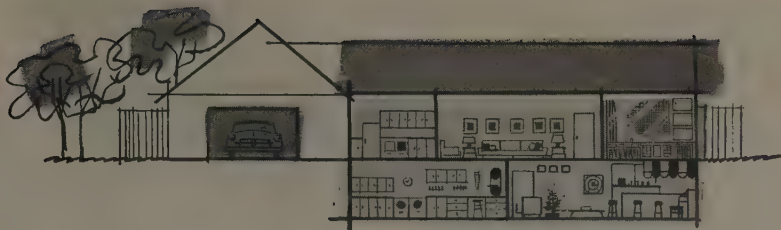
Sirs:

The shapes submitted are all of merit, yet they do not, to me, answer some of the known problems that arise...

Perhaps no shape answers all problems of adaptation to interior and exterior finish,

continued on p.

All through the house...



specify **G-E Textolite*** plastics surfacing for years of wear, minutes of care

It's easy to plan new convenience features when your specifications include handsome, durable G-E Textolite plastics surfacing. Originally developed for long service on kitchen sink and counter tops, G-E Textolite surfacing is now winning wide acclaim for bar and game-room installations . . . bathroom vanities . . . kitchen cabinets . . . children's work and play surfaces . . . laundries—wherever your specifications call for beauty plus extreme durability. With G-E Textolite plastics surfacing, you'll find a pattern for every purpose, from original new designs like G.E.'s CROSS CURRENT, MEDLEY and MING to distinctive wood-grains that harmonize with your finest interiors.

*Reg. U.S. Pat. Off.



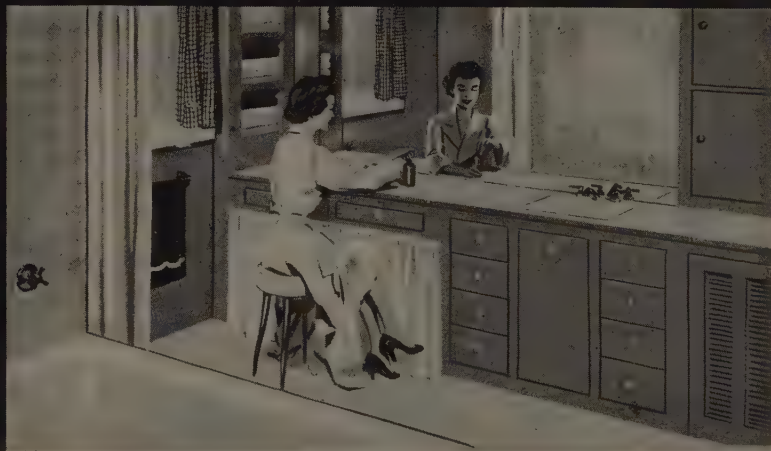
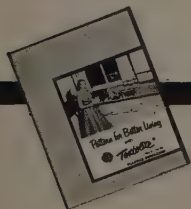
FOR BARS OR GAME ROOMS

New! Simplified installation features! Now G-E Textolite is so quick and easy to install that crews can make *on-the-job* installations. The new G-E pressure contact adhesive eliminates weights or clamps, sets in less than an hour—a big saving in time and labor!

FOR BATHROOMS

See our Brochure in Sweet's File

For further information and your copy of the new full-color pattern booklet and application instructions, write: General Electric Company, Section 431-2A, Chemical Division, Pittsfield, Mass.



You can put your confidence in—

GENERAL  ELECTRIC

New
Attractive
Styling

by world-famous
industrial designer,
Brooks Stevens

New,
Handsome
Smooth Finish

in a new color, Mountain Spring Green

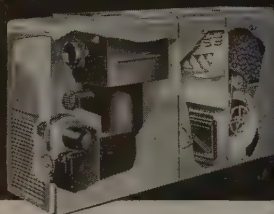


NEW, REDESIGNED

Mueller Climatrol

TYPE 116-216 OIL OR GAS WINTER AIR CONDITIONER

90,000 — 110,000 — 130,000 — 150,000 Btu input



You can add a cooling unit

The cutaway view above shows how the compact, 24-inch square, Type 916 cooling module adapts the Type 116-216 for cooling — to add the extra sales-appeal of year-round comfort to the homes you build.

Available with cooling casing, less coils — which makes provision for adding cooling later with substantial installation savings.

Easy to install

— it's pre-wired and pre-assembled

Every time you install a Mueller Climatrol Type 116-216 in a home you build, you and the home-buyer both come out ahead.

Look at it from the home-buyer's viewpoint

In the Type 116-216, he gets Mueller Climatrol Designed Convertibility. He can burn oil now — convert to gas later inexpensively — and get the same top efficiency.

And he gets Mueller Climatrol construction features that give him extra value for his heating dollars.

Look at it from your standpoint

The Type 116-216 gives your home extra salability, with the eye-appeal of new, modern styling and a new, handsome finish — the buy-appeal of Designed Convertibility and famous Mueller Climatrol performance.

Installation is quick and easy. The Type 116-216 is shipped in two sections — goes through any ordinary door and down narrow, winding basement stairs without trouble.

Get the facts and figures

Get the complete story on the Mueller Climatrol Type 116-216. Write for facts and figures.

B84



Mueller Climatrol

2020D W. Oklahoma Ave., Milwaukee 15, Wis.

LETTERS continued

keeping the rain out, of being of clean simple line, easy to paint and maintain, easy to fabricate and install—all the while being low in cost and sensible in design.

ARNOLD G. GANGNES, architect
Seattle

STEP FORWARD

Sirs:

In the type of houses we design we have given up trying to use standard millwork. It has been much simpler to work out our own. We could use all the details proposed by HOUSE & HOME depending on the job. The architects are ready for a new standard line, but is this average small homebuilder? And what about the owner building his own home from a lumberyard plan? However, I definitely think that millwork of the kind you propose is step forward.

OSWALD BERG, architect
Bozeman, Mont.

STOCK MISFITS

Sirs:

I can't find stock details or sizes which fit in with my design—characterwise or dimensionwise.

L. ROBERT GARDNER, architect
Cedar City, Utah

STRUCTURAL FRAMES

Sirs:

I believe in making frames do structural work, since we use so many and such heavy ones in modern houses.

HENRY HEBBELN, architect
New York City

METAL VS. WOOD

Sirs:

In the last 500 units we have built we use metal window frames with metal sill and metal surround.

W. H. DeCAMP, construction superintendent
Severin Construction Co.
La Mesa, Calif.

CHEAPER

Sirs:

We have found structural milled members such as the ones suggested by HOUSE & HOME cheaper than stock sash.

CHARLES H. BREWER JR., architect
East Hartford, Conn.

STOCK MILLWORK UNSATISFACTORY

Sirs:

I do not feel stock millwork is satisfactory from a design standpoint.

Keep up the good work—this is a real constructive activity.

F. LAMAR KELSEY, architect
Colorado Springs, Col.

Announcing

ARMSTRONG'S CUSTOM CORK TILE

*a new ready-made
custom effect in
cork flooring*

Here's a luxurious modern floor with all the charm of an individually styled custom installation. However, since Armstrong's Custom Cork Tile is precision cut and packaged at the factory, it costs far less than a similar hand-cut floor. Simple, speedy, and inexpensive to install, Armstrong's Custom Cork Tile is a handsome combination of light-colored, nine-inch octagonal tile and dark three-inch squares. It's an ideal floor for better homes, fine shops, libraries, and public buildings—wherever there's an opportunity to offer the prestige of extra beauty. Made 3/16" gauge only.



 ARMSTRONG CORK COMPANY • FLOOR DIVISION
LANCASTER, PENNSYLVANIA

MODERN MORTGAGES

A monthly report on important developments in the modernization of mortgage credit, with particular emphasis on the expanding potential of the package mortgage, the open-end mortgage and the expandable mortgage.

New York Life sees big investment outlet, prepares to make open-end mortgages

For a lender to reap the full fruits of open-end mortgages tomorrow, he should include the appropriate clauses in the mortgages he writes today. Guided partly by this simple ants-are-smarter-than-grasshoppers precept, the New York Life Insurance Co., nationwide mortgage lender and fourth largest life firm in the country, prepared to modernize its future home mortgages with provisions to allow the home owner open-end reborrowing privileges.

According to Second Vice President R. Manning Brown Jr., New York Life contemplates a highly flexible open-end lending program. As a prelude, it has asked all its local mortgage correspondents to obtain approval for a simple but effective open-end clause from each local title insurance firm that guarantees title on mortgages for the New York Life portfolio.

In an address to the Midwestern winter conference of the Mortgage Bankers Association of America, Brown outlined some of the broad conditions for open ending under consideration by New York Life, although he stressed that its final rules have not yet been formulated:

▶ Maximum reborrowing probably would be allowed in excess of the original amount of the mortgage, except in states where legal technicalities made it inadvisable to exceed that amount. All advances, however, would still be based on prudent lending policies: the character and repayment record of the borrower, the margin of security, and the legal conventional mortgage loan limits in various states.

▶ To discourage requests for small re-advances and limit them to amounts that would "make the effort worth-while," the company also would set a minimum figure. (Ordinarily this might be about \$1,000, said Brown, although he reiterated that no rules were definite yet, and this could be a lesser sum.)

▶ Preference would be given to additional borrowing for home improvements and repairs, but re-advances for other purposes would be allowed too. "Where the home owner has a good paying record and the loan is adequately secured," explained Brown, "I can see no reason why the advance cannot cover medical or educational expenses, or some other need unrelated to the maintenance of the home."

Slum preventive. Brown cited various benefits the open-end mortgage provided for both borrowers and lenders, and noted that it also could be "a great advantage to the entire economy, especially in periods of a decline in new construction. It would help take up the slack in a recession, and may be a useful instrument in preventing neighborhood decay."

Open-end mortgage re-advances were estimated at about \$100 million in 1948, said Brown, about \$400 million in 1952, and \$500 million in 1953. By comparison, total spending for home repairs and improvements is now about \$3 billion a year, he added, and mortgage lenders could provide the financing for a progressively greater portion of this market by increasing the number of open-end mortgages they write. His summary of principal merits of an open-end mortgage program:

▶ In addition to providing a greater outlet for investment funds (which also means a larger servicing portfolio for the correspondent), it can reduce relative servicing costs each time loans are increased.

▶ It tends to protect the lender's seasoned loans against refinancing with some other lender. It encourages the borrower to keep his original loan, or to apply to the first lender when he seeks any new financing.

▶ When re-advances are spent for home improvements or repairs they improve the security behind the lender's entire outstanding mortgage balance on the property.

house+home

April, 1954

Published by TIME Incorporated

EDITOR-IN-CHIEF Henry R. Luce
PRESIDENT Roy E. Larsen
EDITORIAL DIRECTOR John Shaw Billings

HOUSE & HOME

EDITOR AND PUBLISHER
P. I. Prentice

EDITORIAL CHAIRMAN
Douglas Haskell, AIA

MANAGING EDITORS
Suzanne Gleaves
Joseph C. Hazen Jr.

EXECUTIVE EDITOR
Carl Norcross

ART DIRECTORS
Paul Grotz
Madeline Thatcher

ASSOCIATES: Edward Birkner, Peter Blake, Gurney Breckentfeld, James P. Gallagher, Marilyn Grayboff, Jane Jacobs, Barney Lefferts, Mary Jane Lightbown, Walter McQuade, Vernon Read, Richard Saunders (Washington), Ogden Tanner, Stephen G. Thompson, Arthur Watkins.

ASSISTANTS: Rosalind Klein Berlin, Gwen Hodges, Henry T. Martin, Eleanor Nadler, Alice O'Connor, Dorothy Stone O'Shea, Olive F. Taylor.

ART STAFF: Associates, Nina Rittenberg, Amnon Rubinstein, Ray Komai; Assistants, Lilly H. Benedict, Martha Blake, Mary Villarejo, Charlotte Winter. (In military service: Jan V. White.)

MARKET RESEARCH DIRECTOR: Arthur S. Goldman.

CONSULTANTS: Miles L. Colean, Ruth Goodhue.

PRODUCTION MANAGER: Lawrence W. Mester.

GENERAL MANAGER
Robert W. Chastaney Jr.

ADVERTISING DIRECTOR
Richard N. Jones

HOUSE & HOME is published monthly by TIME Inc., Time & Life Building, 9 Rockefeller Plaza, New York 20, N.Y. Yearly subscription payable in advance. To individuals or firms (and their employees) engaged in building—design, construction, finance, realty; material distribution, production or manufacture; government agencies and supervisory employees; teachers and students of architecture and trade associations connected with the building industry; advertisers and publishers: U.S.A., Possessions, Canada, Pan American Union and the Philippines, \$6.00; elsewhere, \$9.50. Single copies, if available, \$1. All copies mailed flat. Copyright under International Copyright Convention. All rights reserved under the Pan American Copyright Convention. Re-entered as second class matter September 15, 1952 at the Post Office at New York, N.Y. under the Act of March 3, 1879. Copyright 1954 by TIME Inc.

TIME Inc. also publishes TIME, LIFE, FORTUNE and ARCHITECTURAL FORUM. Chairman, Maurice T. Moore; President, Roy E. Larsen; Executive Vice President for Publishing, Howard Black; Executive Vice President and Treasurer, Charles L. Stillman; Vice Presidents and Secretary, D. W. Brumbaugh; Vice Presidents, Bernard Barnes, Allen Grover, Andrew Heiskell, J. Edward King, James A. Linen, Ralph D. Paine Jr., P. I. Prentice; Comptroller and Assistant Secretary, Arnold W. Carlson.

32 NEWS

56 EVENTS

58 LETTERS

86 MODERN MORTGAGES

98 THREE HOUSES BY ARCHITECT JOHN YEON

The seemingly casual informality of these Oregon houses is in reality the result of painstaking care in detailing, siting, composing of roof lines and shaping of spaces.

110 WHAT'S HAPPENING IN SPLIT LEVELS

On Long Island they are outselling ranch houses four to one because they offer more space and a family room under a smaller roof.

Architects across the country are tackling the design problems of the split level. Examples by Donald Olsen at Berkeley, Calif.; Saul Smiley at Tyro Hills, Minn.; Edwin & Allen Kramer; Louis A. Huebner at Highland Park, Ill; and others.

125 AIR CONDITIONING

Any builder can now predict his operating costs accurately by a new method.

128 FOUR-ZONE HOUSE

For Blue Ribbon Construction Co. at Northridge, Calif., Architects Smith & Williams design \$16,900 house with a central family room, separate areas for children and grownups, well-integrated design inside and out.

134 NEWS

136 CONNECTICUT BUILDER LOSES BATTLE WITH VA

William Nathan of Norwalk has his \$18,000 to \$23,000 houses heavily penalized because they are untraditional, in spite of workable plans, straightforward design and first-rate handling of an exceptional site.

140 MILLWORK FOR TODAY'S ARCHITECTURE—PART II

Report on a HOUSE & HOME survey of architects' and builders' opinions of stock windows; a study made to uncover future opportunities for the lumber industry.

Design standards: details for modern windows, based on the survey, by Harold Sleeper, FAIA.

154 AIR-CONDITIONED PREFAB

George Nelson designs an 1,117 sq. ft. air-conditioned house for American Houses, Inc., to sell for \$15,500, keeps cooling costs to \$36 a summer by informed design. Included: special storage, built-ins, family room.

158 NEW PRODUCTS: ADHESIVES


How to eliminate all nailing from installing new prefinished plywood panels; and a roundup of other new techniques and materials.

164 REVIEWS

206 TECHNICAL PUBLICATIONS







←
Entrance to Cottrell house showing 3'
module carried through stair rail.
Painted panels are a turquoise blue,
dividing strips a pinkish green.

JOHN YEON is an enemy of what he calls "easy architecture." The casual forms of his houses, the clustering roofs, the relaxed interiors—all these are completely deceptive.

For here is some of the most carefully studied, most precisely controlled architecture to be found in the US. Nothing has been left to chance—yet the final impression is unaffected and sometimes almost offhand. Nothing has been forgotten—except, perhaps, the self-importance of an architect.

The happy life is the final goal—not the monument to architectural genius. Yet there is no lack of "stylishness," or of formality where you want it. There is no lack of orderliness, no absence of fine detail. Few architects can match Yeon's preoccupation with elegance. His houses are no "cottages," nailed together in hit-or-miss fashion. They are buildings of importance. He has worked so hard on each of them that he has found time, on the average, to build only one a year.

Houses designed with a lot of thought have a lot to teach. On pp. 106-109 we have listed some of Yeon's highly practical lessons. But, first, let these houses speak for themselves. Here, then, are. . .

THREE BEAUTIFUL HOUSES BY JOHN YEON



The Cottrell house

Module of 3' emerges in the tall, glass-louver-plywood panels on the exterior. Blank wall surfaces are horizontal 1" x 6" cedar, T&G, with a bleached finish.



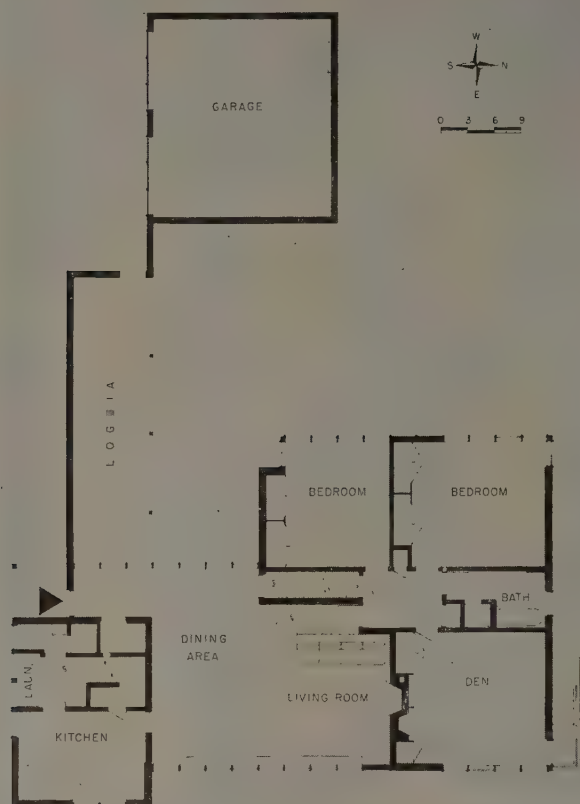
is pulled back from a level hilltop to open up a spacious lawn in front

Designed on a 3' module, this large house for a Portland doctor reveals several characteristics of Yeon's work: 1) the central, glassy and open living area is shaped between three solid blocks of secondary rooms; 2) it is full of different levels, views, changes

of light—yet remains calm and restful; 3) the entire house, in Yeon's words, is "hung back over the edge of the hilltop," thus freeing the most useful parts of the site for a generous garden. (These points are discussed in detail on p. 108.)

Elevated dining area (at right) serves as projection booth for home movies. Screen is rolled down over window at left





Yeon likes complex living rooms because, among other things, they can have sources of light that are partly concealed from the onlooker. The floors in this space are brown flagstone.

The Van Buren house

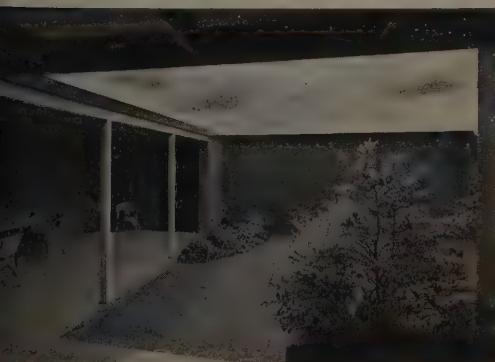




The modular wall panels were painted a gunmetal blue. The brick is rosy red, and the mortar has been colored to match

on a city lot reflects the greater formality of urban architecture

Loggia and garden court make for privacy on a city lot, document Yeon's adaptability to special demands of each particular site.



Few architects are more sensitive than John Yeon to the characteristics of a site. While his country houses seem literally to grow out of their setting and are as complex as nature itself, his city architecture (e.g. his famed Visitors' Information Center, Aug '49 issue) is often very formal, sophisticated and even monumental.

This house, on a city lot, reflects the formality of city living in its strikingly plain interiors, which include the ceiling-high door panels shown in our cover picture. "The rooms never look more complete to me, nor more beautiful," says Yeon, "than when they are empty and the space is unopposed." The picture (opposite) explains why.

In the exteriors there are even some hints of symmetry and an almost classical loggia. Yet in its major aspects this is, quite unmistakably, a Yeon house: there is the 3' module, the 1½-story panel, the multilevel living room formed between solid blocks of secondary rooms (see plan).



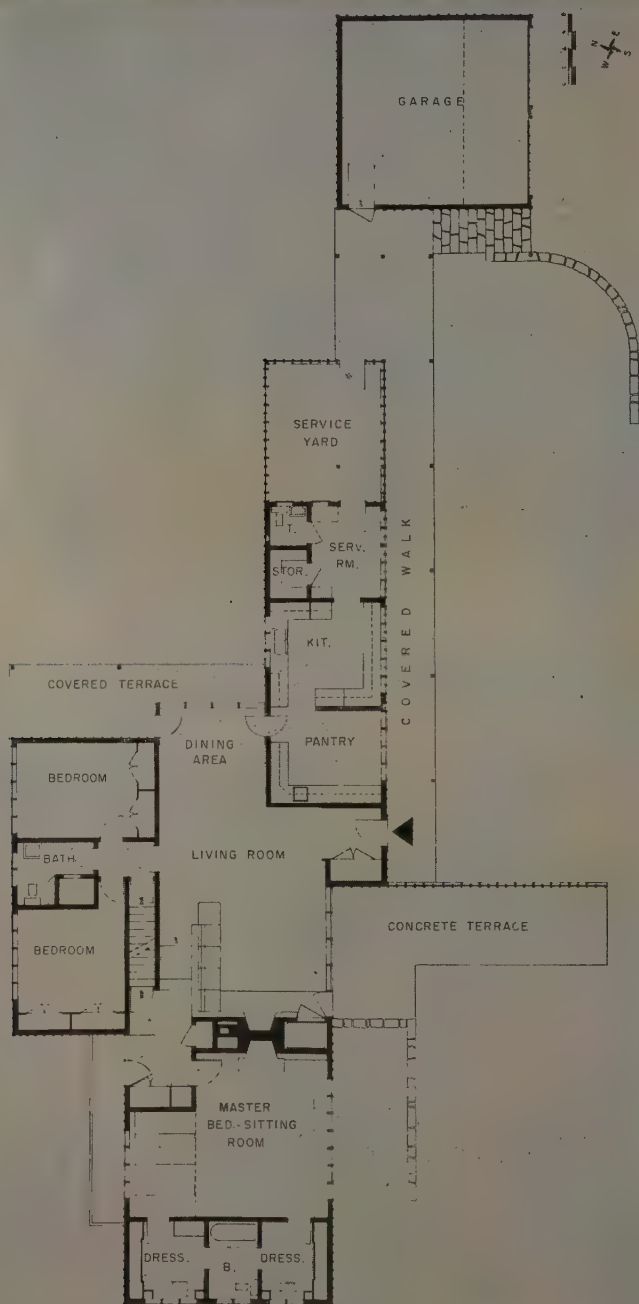
The living-room carpet is turquoise, and the glass and panel areas are accented with related blues and sea greens to contrast with natural wood finishes. This is a characteristic color range for Yeon.



All roof ridges run parallel to the long axes of the house. Below: formal garden on approach side.



The Swan house





The 12" board-and-batten module carries right through the kitchen fenestration (shown fore-shortened at right) to maintain the continuity of the wall. The roof is shaped to emphasize the notion of shelter.

is sheltered by a complex roof whose forms suggest continuous movement

"I like a northern sense of shelter," says John Yeon. He gets that sense primarily through the way he handles his roof lines. The roof, to him, is more than a "lid" that covers (and perhaps unifies) the structure below; it is, rather, a powerful sculptural medium. Just as he uses changes in level, in surface and in light to modulate interior space, so he uses changes in roof line to modulate the over-all forms of his buildings—and to give those forms the same sense of movement that he gets in his interior spaces. The two effects are, of course, inseparable,

and Yeon has often been forced to revise his roof forms to comply with changes in plan.

This house is an outstanding example of Yeon's mastery of both intangible space and tangible form. It is, also, a major success of modular planning and emphasis: it would be hard to find another complicated house that is also so coherent. The module, emphasized by board-and-batten exteriors and panels inside, is basically a 12" unit, expanded to multiples of 12" to give greater importance to major glass walls.



The 12" board-and-batten module in the Swan house is a rather traditional and more intimate precursor of the 3' panels in the Cottrell house (below). Its antecedents can be found in the barn structures throughout the US.

Yeon's modular wall panels have pioneered curtain-wall construction in housebuilding

The rhythmical module in John Yeon's architecture is not only an esthetic concept having to do with discipline, unity and order.

It is also an eminently practical pioneering effort to bring into housebuilding some of the facilities of mass production and prefabrication that everyone has been talking about for more than half a century.

Yeon's characteristic wall unit—logically divided into a glass vision panel, a louvered ventilation panel, and a painted plywood insulation panel (or spandrel)—is a first-rate solution for the prefabricated house wall. It is also, of course, an exquisitely beautiful solution, which should make some of his clumsy imitators bow their heads in shame.

Yeon likes to accent the rhythms of his panels by painting the vertical dividing strips a putty yellow or light green, and painting the plywood spandrels a dark blue-green or gunmetal. The module, recently, has been 3', which works well with standard door widths.

It is curious that Yeon, apparently preoccupied with poetic notions, should prove so very practical. . . .

(Question: when are the non-poets in the homebuilding industry going to get around to so practical and sense-making a solution as the floor-to-ceiling door panel shown on the cover of this issue?)



Here is the 3' panel, one story high. With double glazing (as shown here) Yeon employs an aluminum facing strip to hold the double-glass unit in place at the sill. For single-glazed units, he simply uses flashing under the glass, and putty. Both details are better than the usual wood stop which tends to rot away.

Elsewhere in the Cottrell house, Yeon uses a two-story wall panel reminiscent of the finest skyscraper curtain wall. His vertical dividing strips are milled to a single projecting knife-edge, produce an elegant, sharply defined shadow line. Below (left) is a typical corner detail from the Cottrell house.

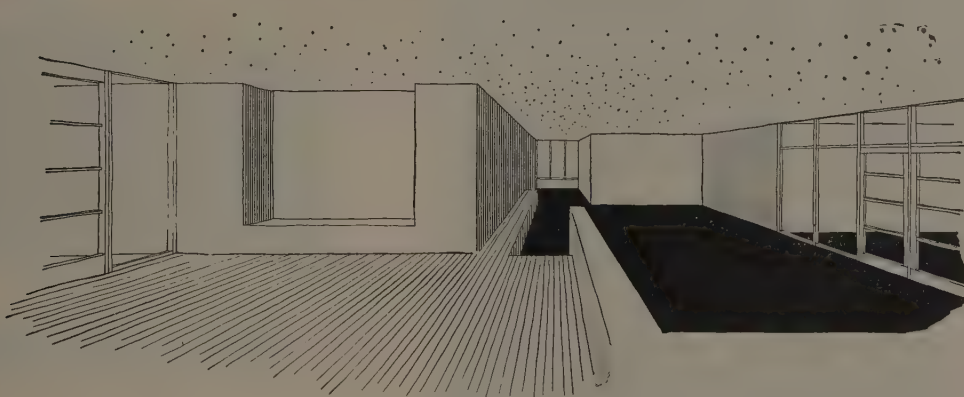




The plans of the Cottrell, Swan and Van Buren houses (shown above) demonstrate one of Yeon's favorite ways of creating a plastic, interior space. "In all three plans," Yeon explains, "the main room exists between the enclosed blocks of the other rooms (shown shaded in these diagrams), with windows occupying all of the exterior walls between those blocks. If the air were solidified and the walls stripped away, the solid would have a shape that is pleasing to me . . . an asymmetrical cubic composition

which is neither static nor restless, suggestive of movement, but in repose." One result is to make relatively small rooms seem large, for each room is full of surprise vistas, surprise sources of light on all sides. These surprises, according to Yeon, "provide ever shifting interplays of composition and effects for one moving about in the room." This space concept is, of course, very different from that of the single rectangle (which is revealed all at once, and may then hold few added surprises).

Yeon's living rooms are sculptured spaces of many levels



Yeon's play with changes in level is demonstrated in this diagram of the Cottrell living room, and in the small pictures showing the same room from different levels and angles. Although there are few unbroken planes, the feel-

ing is one of repose. And while the room measures about 900 sq. ft., it seems infinitely larger and perhaps more interesting than a single rectangular space that might be 25' wide and 36' long.





The Swan house, in typical Yeon fashion, "hangs back over the edge" of the hilltop to free the land for a generous lawn

Yeon places his houses to emphasize the characteristics of the site

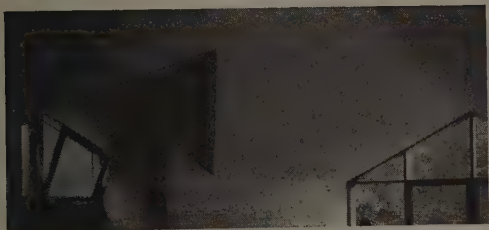
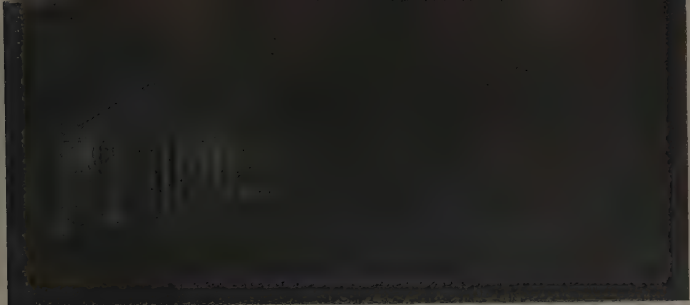
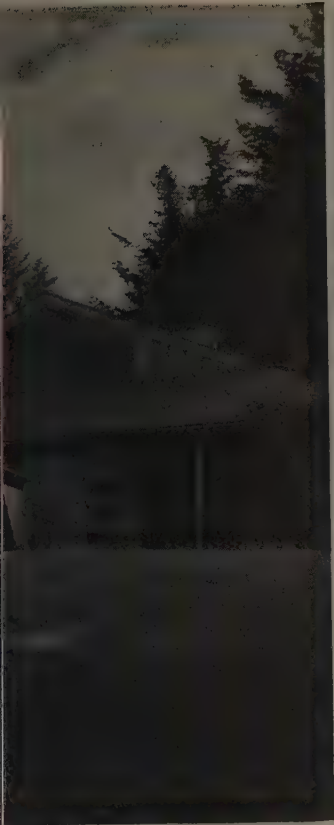
Given a flat hilltop site, most architects would place their houses where they could dominate the landscape. Yeon does the direct opposite: his houses support and subordinate themselves to the qualities of the site, rather than use the site to help dramatize themselves. In practical terms this means that Yeon considers the best possible use of the land—for a lawn, or a garden, or for a terrace—and then pushes his house back far enough from the hilltop to keep all potentially usable space intact. The most obvious application is, of course, in suburban planning, where most builders still insist upon dropping their houses smack in the center of a lot—with disastrous results to the usefulness of the outdoor space. Yeon's Van Buren house (p. 102) suggests that such suburban lots can be made highly useful with walls, screens and proper placement of the house.

Yeon's sheltering roofs are powerful

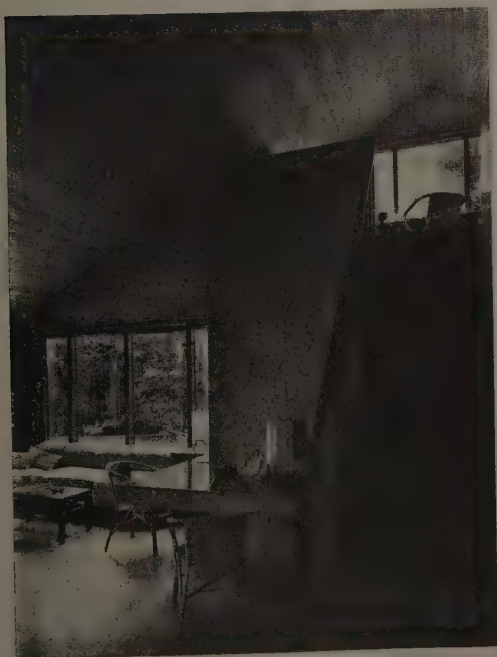
If you were to walk around the house shown in the site plan (opposite), you would find before you a succession of different forms and roof silhouettes that suggest constant movement—that are never alike from one angle to the next. And the part-elevation above the site plan shows how consciously Yeon has developed this rhythmic succession of forms.

Unfortunately, this particular house will never be built. But the three houses shown in our story have those same qualities in their roof lines.

Yet the sculptural roof is not only a means of creating changing over-all forms to be seen from the outside; it also acts as the enveloping ceiling that modulates many interior spaces. Yeon is intrigued by the play of light and shade: and these two pictures, of roof ceilings in the Swan and Cottrell houses respectively, suggest not only how the architect was able to shape his spaces by using the expressive folds of his roofs. They suggest also an extraordinarily sensitive hand: sensitive to the slightest nuances of color, texture, light and shade; as sensitive, perhaps, as a fine Chinese water colorist's; ever opposed to the obvious, to the crude and to the overstatement.



forms in constant movement



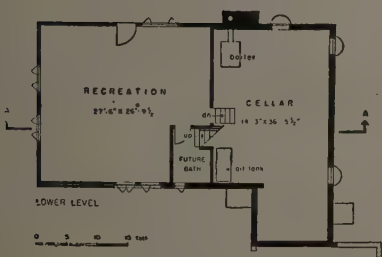
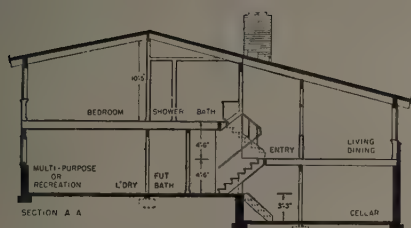




Photos: (opp.) Thomas Airview; (above) H&H Staff

After selling 60 houses in ten days, Architect-Builders Furno & Harrison are enthusiastic over popularity of this split level which has 2,000 sq. ft. plus basement, garage, sells for \$20,000. It outsells a more expensive ranch, 4 to 1. (Floor plan is below.)

On Long Island, splits outsell ranches four to one



Part of Newell & Daniel's 400-house project (left) at \$33,000 to \$40,000. Long Island has many expensive house developments and builders say splits at these prices are increasing in sales popularity.

Because it is the most concentrated, highly competitive homebuilding area in the US, hundreds of builders tour Long Island developments each year to see the experiments and new ideas constantly being tested there.

Long Island's big news today is the split-level house. It has become a runaway favorite over all other types. No other type has ever come up so fast or been such a quick sales success. The split is not new. It is the "trilevel," built in the Midwest for years. Its eastern revival began in New Jersey several years ago, but when Long Island builders picked it up in 1952 they gave it some new twists and pushed it hard. Originally a house that architects fitted nicely onto sloping ground, splits are now crowded together on flat land and bear little resemblance to the original hillside split level.

The sales success of the split is already influencing builders in other areas who are impressed by its popularity. The lessons of the split level are clearly these: people are tired of the same old thing. They want more space, a recreation room, more bathrooms, bedrooms separated from the living area, a house that looks large and impressive. In the split level they find all of these features.

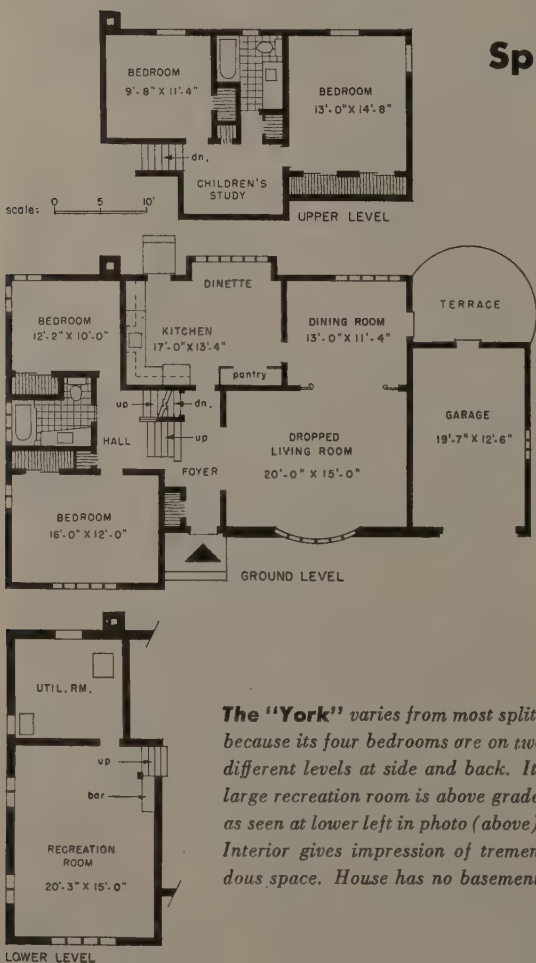
In these 15 pages HOUSE & HOME's editors appraise the split, show its liabilities as well as its assets, and suggest ways to utilize its good points and improve its bad ones.



At \$22,990 the public decided this 1,950 sq. ft. split was most house for money

Split level crowds other designs

off market at Bar Harbour



The "York" varies from most splits because its four bedrooms are on two different levels at side and back. Its large recreation room is above grade, as seen at lower left in photo (above). Interior gives impression of tremendous space. House has no basement.

What is happening at Bar Harbour is typical of the popular appeal of the split level. With 500 fine lots at Massapequa Park, Builders Siegel & Chess have done one of the best merchandising jobs on the Island. They opened 16 months ago with two ranch models and two 1½-story houses at \$24,000 to \$27,500. These big, luxury houses had plenty of space and eye appeal; 80 sold the first year.

Then Siegel & Chess introduced their first split level. In four months 40 splits were sold and *sales of the other houses stopped immediately!* The new split began selling at a rate of 120 per year in contrast with the earlier rate of 20 per year for each of the others.

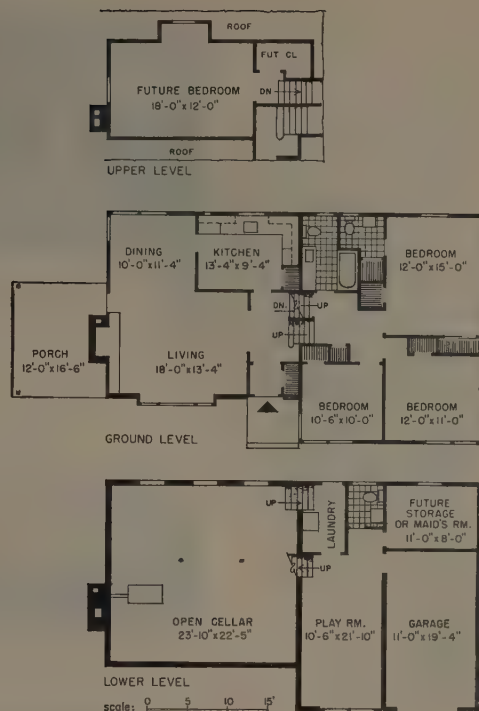
"It's just more house for the money," explains Architect Herman York, who designed them all. "It has two rooms more than the ranches and sells for \$1,000 to \$4,600 less. The recreation room is free space in a sense—you pay only for finishing it. You also get good, usable space high up in the shed dormer for two top bedrooms. I've designed a new front-to-back split for them which sells for \$28,000. Are splits just a fad? No, they're too good a house to fade out of the market."

Said a Bar Harbour salesman: "The more a prospect asks, 'Why don't you have . . . ?' the fewer sales you make. This house has everything and people can't think of anything else to ask for. No wonder it sells."

At \$21,500, Holiday Hill has a big, impressive package for buyers

The great popularity of the split level is explained by the photo below and the plans at right. Compared with a ranch house at the same price on Long Island, this looks like a large, luxurious house. And it is. It has three bedrooms, 2½ baths, an above-grade playroom, provision for two more bedrooms, a cellar for storage and a porch. There is a lavatory off the playroom, which is convenient for children entering from the grade door in the laundry.

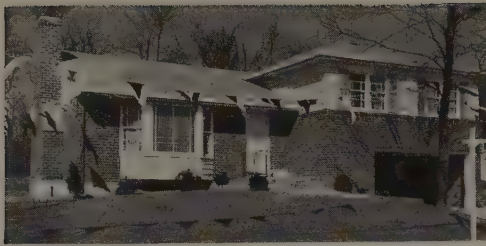
There are many extras to snare the prospects from New York City apartments: a 16' ceiling in the center hall, a 9' raised-hearth fireplace with built-in bookcases, playroom paneled in knotty pine, a front-to-back living and dining room with big windows at each end, a private bath with shower for the master bedroom, oil-fired, hot-water heat. Not all lots have such fine trees, however.



On sloping ground this split level fits well on its site

Photos: H&H staff





The lead is 30-to-0 at "Morewood Oaks" for this \$25,500, 1,600 sq. ft. split over \$22,250, 1,300 sq. ft. ranch (right). Split costs \$16 per sq. ft., ranch \$17.11, including same size



lot. Buyers preferred to pay \$1,600 more for the large split with larger lot, all brick veneer, built-in oven, extras, than for a cheaper split built last year but now discontinued.



Split at \$22,690 (above) outsells ranch (right) priced \$19,500, 7 to 1 at "Marble Hills." This is a front-to-back split with three bedrooms running across back of house on upper



level. Downstairs recreation room, 30' x 14', extends across rear, opens to paved terrace. Ranch house is good buy but most families will pay more for the larger split.



A 3-to-1 favorite over ranch at "Sweet Hollow" this split draws \$3,000 more from buyers who get an extra 238 sq. ft., plus a recreation room, laundry and hobby room all above



grade, and 1½ more baths. Children can enter grade door, use lavatory next to recreation room. Split has 2½ baths, 1,480 sq. ft. (plus laundry, garage), is \$16,950 on half-acre.



But ranches are not dead at "Midwood Park," where ranch (at right) at \$13,990 sells even with split (above) at \$14,990. A Cape Cod (not shown) at \$13,590 sells 20% behind. Split



has 1,433 sq. ft. including finished playroom but not laundry, boiler room, garage. Half of house has crawl space. Ranch has 900 sq. ft. plus that much basement, but no garage.



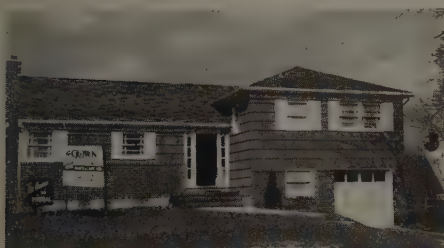
At \$12,990 this 1,360 sq. ft. front-to-back split includes a 20' x 20' recreation room, larger than the living room. "Maplecrest" has sold 105 since October.



"Saxon" is \$13,990, looks big, has three bedrooms, 1½ baths, 26' recreation room, a popular bay window, hot-water heat. In first three months 60 were sold.



"Belt Park" is \$13,990, has sold over 100 since October. A feature is its 11' bath plus two other half-baths. Front playroom takes the space of half of two-car garage.



"Crown Village" has sold nearly 600 houses: 50% are splits like this one at \$16,590; 40% are Cape Cods at \$13,990, 10% are "the forgotten ranches" at \$15,750.

Photos H&H staff & Richard A. Smith

Sales figures tell

the split-level story on Long Island

Sales figures for the houses shown here are a fair cross-section of what is happening on Long Island. They are borne out by the sales of many other builders. Last summer, for example, when Stackler & Frank opened three new houses with a big fanfare, newspaper men were guessing that a new ranch house would sell even with a split level. But of the first 200 sales, 152 were splits at \$15,990 and \$13,990, 28 were Cape Cods at \$12,990 and 20 were the \$15,490 ranch. At "Sherwood Gardens" splits are outselling ranches and Cape Cods 72 to 1 and 72 to 2. At "Westbrook" the ratio in favor of splits is 20 to 1 and at "Birch Knolls" it was 180 to 2 and 0. In nearly all cases, the splits are from \$1,000 to \$3,000 more expensive than other types.

In fairness it must be said the odds are not always this great nor are they always in favor of the split. At "Smithtown Estates" the split is a two-to-one favorite. At "Connelly Homes" a poorly designed split did so badly against a Cape Cod it was discontinued. At "Miller Homes," "Eastwood" and "Clearmeadow" the split had either a very slight edge over other designs or ran even.

Many builders believe the split is not a practical house type below \$12,000 or above around \$30,000. Because of its stairways and complicated framing, it cannot be compressed into too small a space. Above \$30,000 a ranch house, with its one-floor-living advantages, can include a recreation or family room. Builders Guterman & Welling find their ranches at \$30,000 are outselling their splits at \$28,500-32,950.

People like splits because:

1. They look big from the outside

When "Cadillac Homes" began selling this house (right) at \$17,990, it was an immediate success and most of the 115 houses were sold in two months. Although not so long as a ranch at the same price, a split has more bulk, looks bigger. Sales asset: it is something new and different.

Photos: County Photo Service and H&H staff



2. They look big inside

Many buyers are sold on splits when they step inside the front door. There is a big-house feeling because the living room often has a high ceiling, is open to a bedroom hall gallery and sometimes the view is open through to the recreation room below. Adding to the feeling of spaciousness is a large bay window. The photo at left and those on the opposite page are of "Suburban Greens," where a 1,740 sq. ft. split on a 70' lot sells for \$17,890.



3. There is more space to do more things

House (at left) is typical of many splits. It is all things to all families. Its eight rooms include three bedrooms, 2½ baths, 29' playroom, laundry room above grade, paved rear patio, storage attic, and for \$600 more the entire basement is excavated. Many splits have four bedrooms. Thus a family can use the space to suit its own personalities. To families who have been living in apartments or small ranch houses these splits look enormous.



4. Bedrooms are more private

The "upstairs" bedrooms are a popular asset. They are separated by both height and distance from the living room. Bedroom windows are high above the ground and give more privacy. Families do not seem to mind climbing five or six steps.

5. There is a second living room

Greatest single sales feature is the recreation room. It is above grade, has no feeling of being in the basement. A big room like this at the rear with a terrace is the Long Island equivalent of what every Texas house of over \$25,000 has: a rear family or clubroom where the people really live.



6. Outdoor living is easy

This terrace opens from the recreation room (above). Many splits are less pretentious but most have a grade door through which children can come and go to the recreation room without being on the living-room floor. Many builders with one-story, basement houses where rear basement wall sticks up out of ground could turn their basements into this same kind of sales asset.



Complex framing on four levels is shown in photo. House has subbasement (lower right), garage and playroom at grade level (lower left). Living wing is middle right, two bedroom floors are higher. Only slight grading is done at sides and back.

Construction raises some problems

Compared with a one-story ranch with basement, a split level has less roof and less foundation, but needs more lumber for framing and floors, more sheathing, siding, insulation, there is more work on scaffolding, heating costs more. There may be more grading.

Long Island builders believe that costs for framing a split are from 5% to 15% more than for a ranch. With its several levels and many rooms, a split is the exact opposite of the "one-big-room" theory of construction suggested by the Small Homes Council and promoted by H&H (Jan. '53). Many splits are built on five different levels (including basement) and the framing is a forest of studs.

Some builders pooh-poo the idea that a split is harder to frame. "You do it in two separate operations," they explain. "You frame half as a two-story house, half as a ranch. Framing crews learn on one or two houses, then have no trouble."

When a builder offers a ranch, a Cape Cod and a split level the split is usually the most expensive. But in nearly every case the price per square foot of comparable finished floor area is cheapest.

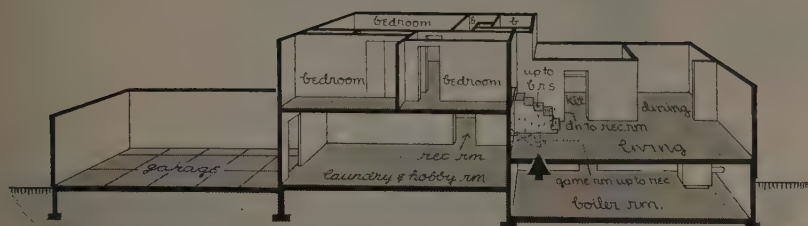
The most house for the money in the US?

Long Island probably offers more for the money in fully winterized houses on expensive land than does any other area. One reason is

competition, another is that subcontractors want work, and a very important reason is that mechanics know their work and are highly specialized. Nearly every builder subs all his operations. Split level framing is so familiar that carpentry crews could almost do it blindfolded. Said a builder who returned recently after building in the Southwest: "The subs here are really wonderful. Mechanics get top rates but they produce."

Many builders are providing 2½ baths in a split when they gave only 1 or 1½ in a ranch. Plumbing and fixtures cost more, but less than might be imagined because bathrooms are put back to back, with the downstairs lavatory directly below. Long Island is probably the biggest center for hot-water heat in the US and it is installed by the plumber. He is content with one profit for both plumbing and heating.

Builders like splits because they can be put on marginal land where a full-basement house would not be practical. Because a split sits high out of the ground with no basement or a shallow half-basement, it can be put near the shore where the water table is high. In fact, some builders were forced to begin building split levels primarily because of high water tables or what was practically mashland. But all land is expensive, the average price now running from \$6,000 to \$7,000 an acre.



Typical side-by-side split with garage at side rather than under house (shown above). Some plans have boiler room in grade-level laundry, do not excavate real basement (as at lower right). This has rear recreation room and a separate hobby and laundry room.

Front-to-back split is newest trend which many designers believe preferable because it keeps front roof line straight. It may or may not have basement under front living room.



What's wrong with splits?

1. Many are ugly. To blend the two halves is more difficult than to design either a one-story or a two-story house. If fronts look awkward in these photos, the drab sides, backs and roof lines look even worse. On flat-treeless farmland a row of typical splits sticks out of the ground like sore thumbs.

2. Some are a fake. They pretend to be hillside houses, which they are not. They force the natural grading to conform to the house, rather than making the house conform to the site.

3. The "six easy steps" up and down are a delusion. Despite the national trend to one-floor living, some of these houses have five sets of stairs, including those up to the front door. Many salesmen who have worked in splits a year are tired of them, predict the public will turn against them because of the stairs. In many houses, the steps are too steep for elderly people.

4. There are heating problems. The slab floor of the recreation room is cold (Long Island builders used hot-water heat, with radiators or convectors in the recreation room) and the many levels cause temperature differentials which require a more exact balancing than in a one-floor house. One or two bedrooms are over the garage, which means floors are cold unless well-insulated.

5. Compared with a ranch design, the split is difficult to build.

6. Chief attraction of the split may be its novelty. "It has only two features a ranch doesn't have," said one salesman. "It has bedrooms separated from the living room, and it has a recreation room. Both these features can be designed into a one-floor house, especially a house with a basement."

What are the lessons?

1. The split can be designed to look better (see the next pages).

2. Its best ideas can be used in one- or two-story houses.

3. The above-grade recreation room (finished, heated, well-decorated, big windows) can be used in thousands of houses now built with basement walls that project four to six feet out of the ground. These dark holes can be turned into big, light rooms.

4. If it is legitimate and economic to grade up to a split level which sits several feet out of the ground, then it is also legitimate to scoop out some earth to permit big "daylight windows" in a basement recreation room and make it seem above grade.

5. The stairway down to a recreation room should not look like basement stairs. It should be bright and well-lighted, preferably paneled, and should not lead out of the kitchen.

6. Many a three-bedroom house can find space under the roof for a fourth bedroom, common practice in split levels. In a model house it should be finished to show how well it can look.

7. Bedrooms must be farther from the living room.

8. People want more bathrooms and ingenious builders can find a way to add them at not too much extra cost.

9. Perhaps the most significant lesson for many builders is that people will pay more to get a "deluxe model" with extras.

For solutions to the many design problems of split levels and suggestions for ways in which architects in other areas have treated this type of house, see the next pages.

MEMO TO

split-level

builders:



YOU SURE NEED A GOOD ARCHITECT!

We were going to start this little story with a learned discussion of the origins, purposes, functions and meaning of split-level houses; whether they made more sense on a hillside or on level ground; and whether their prevalence would enhance the Republic or destroy it.

In other words, we were going to ask:

when do splits make sense?

Then we suddenly realized that *anything* makes sense as long as people want to buy it. It may be that people are being sold a bill of goods, or it may not. In any event, they are buying splits the way they used to buy yo-yos, and so we are going to revise our question, retreat to prepared positions, and ask:

given a split, what can you do about it?

The answer to that one is: **plenty!** To start with, you can read the next four pages. After that, if you have any feelings about the way you would like our country to look, then the sooner you get yourself a good architect, the better for you, your community and the nation.

For—let us face it:

the average split is the worst thing that has happened to the American home since Mrs. Potter Palmer

As one lady split-dweller said recently: "I'm always halfway up or halfway down, but never anywhere in particular." That could be fixed. The worst thing is the way they look on the outside, the way a string of them looks on a street, and the way they look from the back. How are you going to fix *that*? Well, let's see:

To start with—

what is a split?

Anyone who has recently been out on Long Island might answer: "A one-story ranch house and a two-story Cape Codder locked in mortal combat." The description is fairly apt.





Technically, however, a split is a house with at least three separate levels, two of which are located one above the other, and all of which are one half-level apart in elevation.

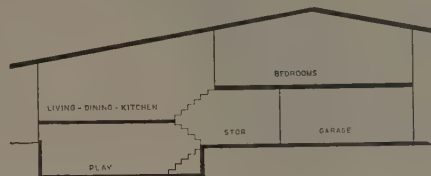
The most common way of arranging these three levels is to put a garage, play-room, utility room and storage on the lowest one; to put the living room, kitchen and dining room on the middle level; and to put the bedrooms over the garage level, on the highest floor. The main entrance to this type of split is generally on the middle level—but it sometimes works better to have it on the lowest level (as we shall see in a moment).

Sometimes it is possible to tuck a fourth level in under the living area, and thus to get a second living room or playroom, with high windows all around.

As these photographs show, such high windows can be very nice. With a little extra excavation, you can have a terrace outside that bottom-level playroom.



Top: Architect John C. Johansen.
Below: Architect Marcel Breuer.



There are plenty of other variations on the split-level theme, but the type explained above is the principal split used by builders today—the only variation being that they sometimes run the splits parallel to the street, and sometimes front to back.

What is so tough about designing splits?

Three things, primarily: first, how to place them on a site. Second, how to make the split-up facades look relaxed. Third, how to get a good-looking street. Let's take these points up, one by one:

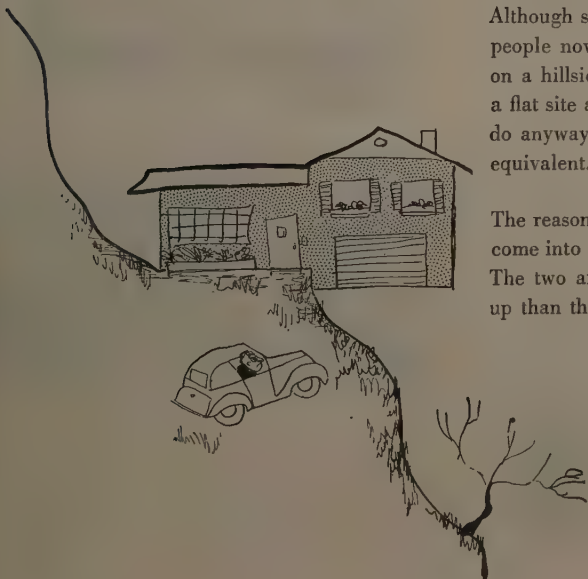
Site planning presents some knotty problems . . .

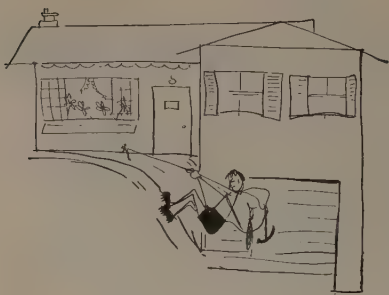
Although splits were originally meant to be on hillsides (see p. 124), a lot of people now feel that they are easier to build on level ground. The reason: on a hillside, the basement walls need to resist a lot of soil pressure, but on a flat site all you have to do is excavate below the frost line (which you must do anyway) and line your excavation with an 8" concrete block wall or the equivalent. But the trouble is—how do you grade around a split?

The reason that it is so difficult is that, on the main split facade, you want to come into the garage with your car, and also come into the front door by foot. The two are probably next to one another—but the front door is 5' higher up than the garage door.

Well, does it have to be?

(For the answer, turn the page.)





Take a look at these two split facades. At left, we have Builder A. and his Split Ranchburger. On the right we have Architect Charles Smiley, from Minnesota. A. has the dickens of a time getting from his garage level to his front-door level without the use of heavy climbing gear; Architect S. put his entrance lobby on the *lowest* floor, right off the garage, and he just comes into both doors on the same level. His living area, half a level up, is on grade also—and a little retaining wall next to the front door makes sure that it will *stay* on grade, even after the next rainstorm.



Retaining walls outside are an absolute must if you want to make sense of your split. And since retaining walls mean changes in grade, you had better get a landscape architect to tell you how to grade your lots—or else you may find that the rain draining off lot No. 10 has washed away your customer on lot No. 11.



Hedrich-Blessing; Courtesy: Woman's Home Companion



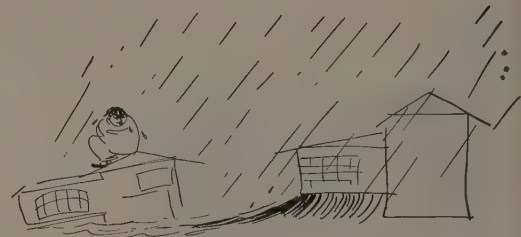
2. Simplify your roof. Most split-builders like to put one kind of roof on the two-story part of their houses, and another kind of roof on the one-story part. Nothing does quite so much to cut up the facade.

At right is Builder C.'s split with its double-decker roof. Not only does it not look very pretty, but it also costs Mr. C. a lot of extra flashing.

Now take a look at The Architects Collaborative's split in Lexington, Mass. (below it). The roof runs the other way—pulls the whole house together. It requires no extra flashing. It makes the living room about 1½ stories high (which is a first-rate sales point). And we think it looks very handsome.



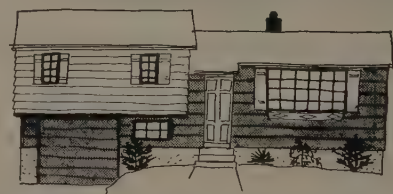
F. J. Maroon



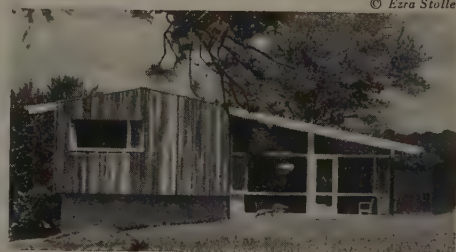
How to unsplit a split facade . . .

The split facade needs unsplitting, and there are at least three good ways of doing it.

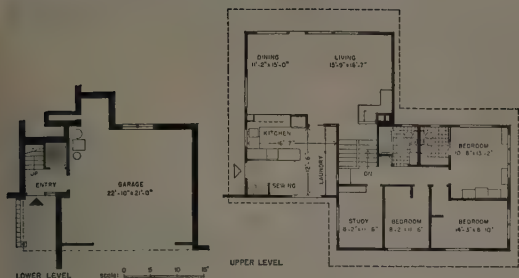
1. Panelize the facade. Builder B.'s split (drawing, left) is almost identical in plan to Architect Louis H. Huebner's below it. But look at the difference: B. has got so many different lines, features, openings, materials and sizes crammed into a single facade that it looks as if he had used up a lot of leftovers from previous houses. As we leave the site of this accident and turn to Architect H.'s neat little house, we find that he has superimposed a strong, regular (and, incidentally, structural) grid. All the rectangles belong together—and they are all alike. Yet each contains some other material—glass, or stucco, or plywood, or a door, so that there is plenty of variety.



© Ezra Stoller

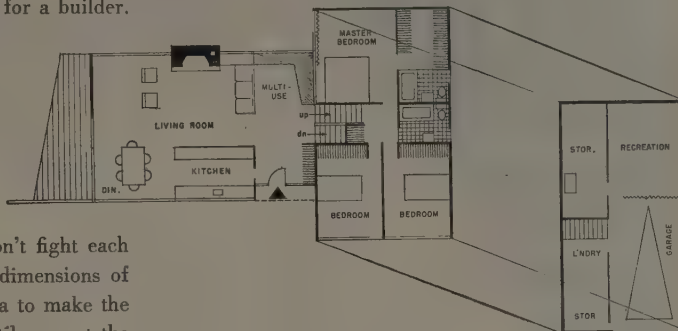


There are other roof ideas that somebody ought to try: for one, a single shed roof, with its high point over the bedrooms and slanting downward toward the far living-room wall, has yet to be tried in a small builder house. The custom-designed house, by Architects Brown & Wright (left), shows how such a roof might work out.



3. Offset your wings. One of the chief troubles with split facades is that all the splitting generally happens in a single plane. Now if builders like to build the two major parts of their splits separately (as we discovered on p. 118), then there is no reason why they couldn't offset them a little, the way Architect Smiley did it here (see also picture, opposite),

and as Architect Sidney Shelov is about to do it in this design for a builder.



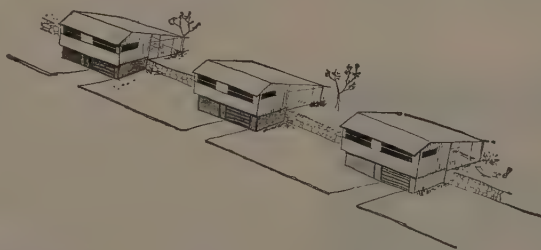
Advantages? Plenty—1) the two halves of the split facade don't fight each other; 2) you are not limited in your bedroom floor by the dimensions of your garage floor underneath. In fact, it would be a good idea to make the garage floor smaller, recess it a little under the bedrooms, cantilever out the latter and get a covered walk from garage to front door.

and how to unscramble the streetscape



Lots of streets look like something out of a shooting gallery, but a street of splits really looks like a procession of sitting ducks.

We think there are two obvious ways of avoiding that Coney Island look. Just for a start: first, how about concentrating on front-to-back splits? They give you a street facade of two-story houses, and they simplify your grading problem on that street—because you can run a continuous, retained terrace parallel to the sidewalk. Here is what we mean:



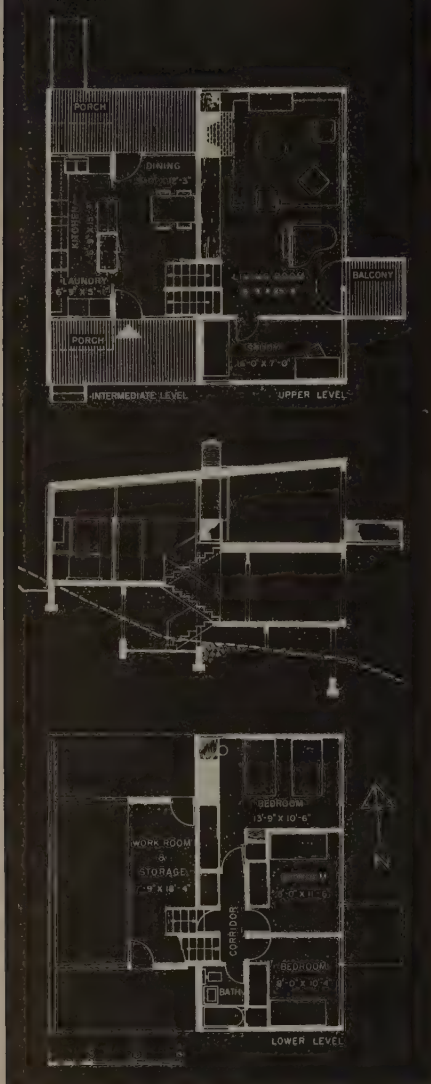
The other way might be to run your roof the way the TAC house (opposite) has it, (see right):

And of course, there are ways of getting variety with different materials—but, *please*, not all in the same house! And there are ways of getting interest by mixing two or three different splits along one street—but, *please*, try to group your types together, two or four in a bunch, so that each stretch of the street retains some sort of unity! For the *successful* street is like a single, long outdoor room: its walls are the facades of your houses (and you would hardly use a dozen different kinds of wallpaper in a single room).



From here on, you and your architect are on your own.
Let us know how you make out—THE EDITORS

P.S. You will probably also be interested in
the hillside split on the next page.



Photos: Rondal Partridge

This hillside split level has an unusual plan

Split-level houses were originally developed for hillsides, and this neat little 1,500 sq. ft. design for Berkeley, Calif., by Architect Donald Olsen, shows how well they fit that type of site: the main entrance is from uphill into the intermediate level; the living room is half a flight up (for a better view across treetops); and the bedrooms are half a flight down. Kitchen, laundry and dining space are located on the entrance level, so that the housewife can control the entire house while at work. The two upper levels open into each other for a greater sense of spaciousness.



Entrance porch on uphill side is reached by a small bridge. Exterior of house is painted vertical siding, with bright color accents in under-window panels. Right: open stair to living room.



Living room looks down upon dining area. Continuous, exposed ceiling helps unify spaces. Makes each seem larger than it is. Only downstairs bedrooms are closed off from major living areas.

Air-conditioning operating costs

can now be predicted by a new forecasting method

A new way to predict the electrical operating cost of residential air-conditioning units in virtually any house in any location has just been announced. This is highly significant news for architects, builders and dealers. Moreover it gives FHA-VA an accurate yardstick for setting up financing terms for air-conditioned houses (some 120,000 to be built this year, say experts).

The technique, just developed by Carrier Corp. research engineers, "will ordinarily predict summer operating cost to within plus or minus 8% or \$10, whichever is greater." That it works was confirmed during the hot summers of 1952 and '53 in a variety of conventional houses used as guinea pigs. Examples:

► In Atlanta, power bills to cool a 3,000 sq. ft. house were predicted at \$155; the actual cost at summer's end: \$151.

► In Dallas, cost to cool a 3,200 sq. ft. house was predicted at \$177; the actual cost was \$167.

► In Washington D.C., cost to cool a 2,100 sq. ft. house was predicted at \$58; the actual cost was \$53.

The key factor. Basic discovery that led engineers to this new forecasting method came when they uncovered this important fact: the amount of work put in by the compressor is directly proportional to the number of "degree-days"* per summer above 70° (the same way heating is related to degree-days under 65° in winter). The higher the mercury rises above 70° the longer the cooling unit must work. And although 70° may be delightful outdoors it is really the starting point for cooling indoors, chiefly because of heat created by lights, people, cooking, etc. The total number of degree-days per summer is thus the tip-off to the total amount of cooling performed by the cooling unit.

New York City, for example, averages 400 degree-days per summer, Nashville 746, and Houston 1,483. By equating these data with such facts as size of the cooling unit, local power cost and the calculated cooling load for a house, operating cost can be predicted with the impressive accuracy shown above.

Cooling load prescription. In using this prediction method, engineers emphasize that the house cooling load must be based on the average 24-hour estimating system. Many manufacturers already supply forms for computing the cooling load this way. Or builders and architects can figure the cooling load of their houses by using the 24-hour method published by Carrier. In addition, predicted operating cost is based on the thermostat being kept at a reading between 72° and 75°—most popular thermostat settings in air-conditioned houses.

Obviously, even the most foolproof method of prediction cannot be guaranteed to hit the bull's-eye every time. Some allowance must be made for such unusual conditions as families taking extended vacations, or a houseful of kids running in and out all day. And certainly actual cost will vary somewhat with summers that are much hotter or cooler than the norm. A really hot summer will naturally boost actual costs over predicted costs. But over a several-year period the actual cost for a house will still average close to the cost predicted (which obviously can be based in advance only on an "average" summer). Or a combination of such conditions can easily cancel each other out and predicted costs will be amazingly accurate every summer.

* Calculated by subtracting 70° from the average monthly temperature and multiplying by number of days in the month. Doing this for each month of an average summer gives total degree-days for any location (listed for 15 cities on the next page).

Note: this article is based on a new report just written by Carrier Engineers S. F. Gilman, L. A. Hall, and Director of Research E. P. Palmatier, for presentation in June to the American Society of Heating & Ventilating Engineers.

Load Factor, F

Mean Design Temperature, T_m

94° 92°

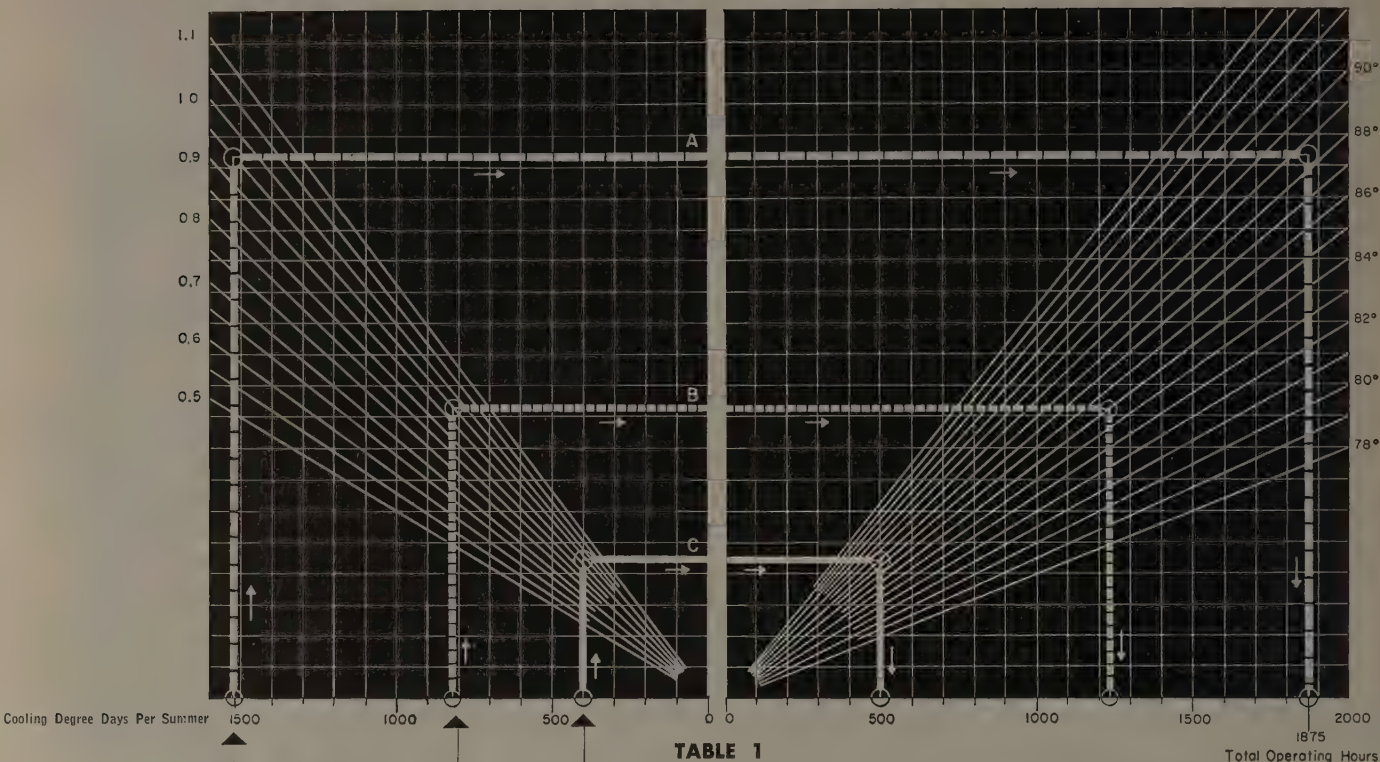


TABLE 1

Photos: Frank L. Miller;
Ben Schnall



Architects: Curtis & Davis for New Orleans Builder F. C. Loucks



Architects: George Nelson & Associates for American Houses Inc.

How the new prediction system works is illustrated by using this 1,400 sq. ft. house in New Orleans as a test case. It is well-shaded by trees and umbrella-like overhangs. Air conditioning is by means of a 2-hp air-cooled unit with a capacity of 21,600 Btu's and an average electrical input of 2.7 kw. These figures are necessary for the calculations and are supplied by the manufacturer. Other data needed to predict operating costs in New Orleans are taken from the profile chart on this page:

Total degree-days per summer: 1,519

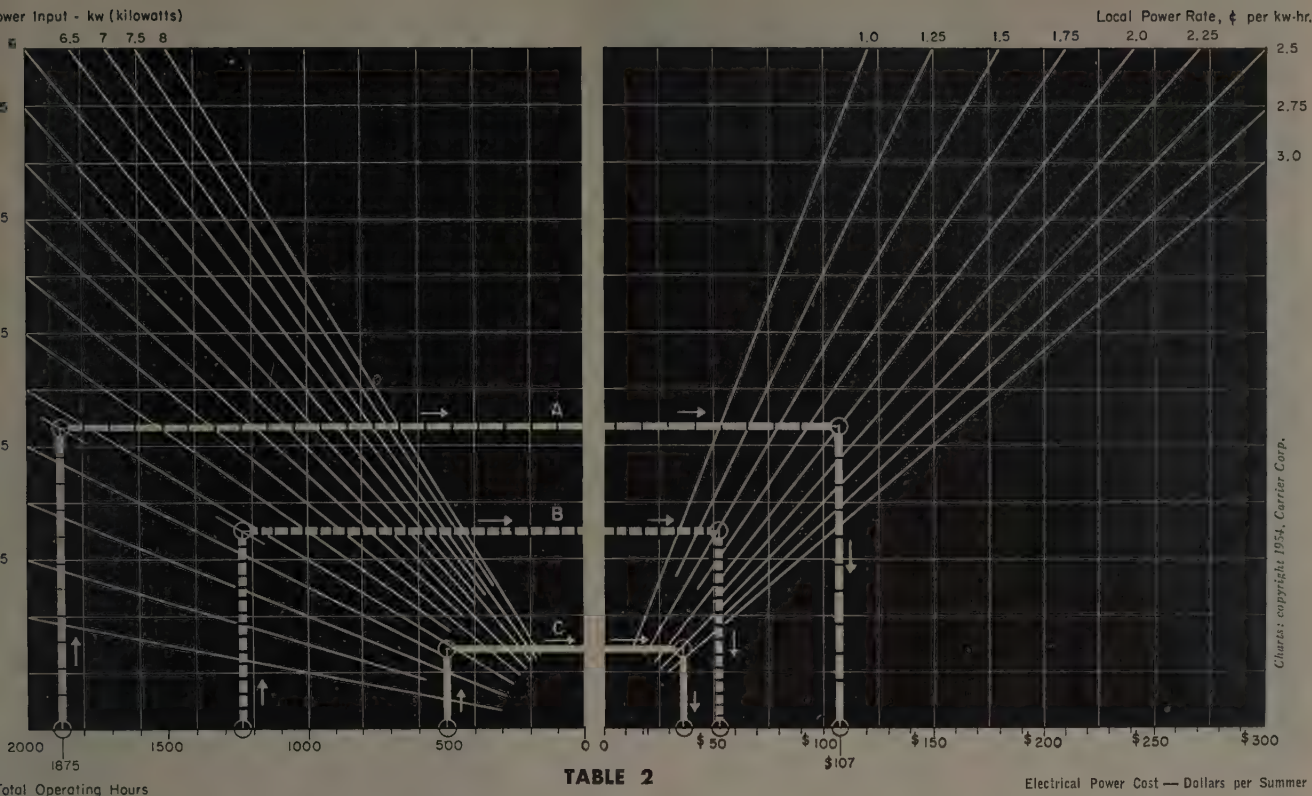
Mean outdoor design temperature, T_m : 88.5°

Local power rate for cooling: 2¢ per kw-h

As degree-day data are not now available for all cities, architects and builders can substitute a figure given in the profile chart corresponding to the nearest city. A more accurate number can be obtained from local Weather Bureau data (see bottom of p. 125). Meanwhile engineers hope that architects and builders will urge the Weather Bureau to compute degree-day data for all cities.

Mean outdoor design temperature, given for 15 cities in the profile chart, can be secured for other cities from data in the ASHVE guide. It is the outside design dry-bulb temperature minus half the daily temperature range. In the case of New Orleans the outside design dry bulb temperature is 95 and the daily range is 13. So: $95 - 6.5$ equals 88.5°.

Another basic figure to the predictions is the calculated cooling load in Btu's for the house, based on the 24-hour method discussed on the preceding page. For this house in New Orleans the calculated cooling load is 20,500 Btu's per hour, or 1.72 tons.



Step 1. Determine the load factor F. This is the 24-hour cooling load of the house (20,500) divided by the capacity of the unit (21,600) or .95.

Step 2. Find the total operating hours per summer from chart 1. From a point on the base line at 1,519 (which is the degree-day mark applicable to New Orleans, secured from the profile chart) a vertical line is traced up to the F diagonal for .95 (which is the load factor worked out in Step 1), and a horizontal line is followed to the right to the Tm diagonal for 88.5° (the mean outdoor design temperature for New Orleans). From that point a vertical line is traced down to the base line which ends at 1,875; this is the total number of operating hours.

Step 3. Find cost of electric power from chart 2. Starting at lower left with 1,875 hours, follow dotted line A vertically to the power input diagonal for 2.8 kw (electrical input to the cooling unit), go right to the power rate line for 2¢, and drop vertically to total power cost: \$107 a summer. In this case this is total operating cost since an air-cooled condenser is used and there are no water charges.

If a house is not outfitted with a water saver the extra cost for city water is easily estimated from total operating hours, the local rate and manufacturer's data on water usage for a particular size unit. If a cooling tower is used the extra cost for make-up water is negligible—no more than about \$4 a summer for the average house even in Texas.

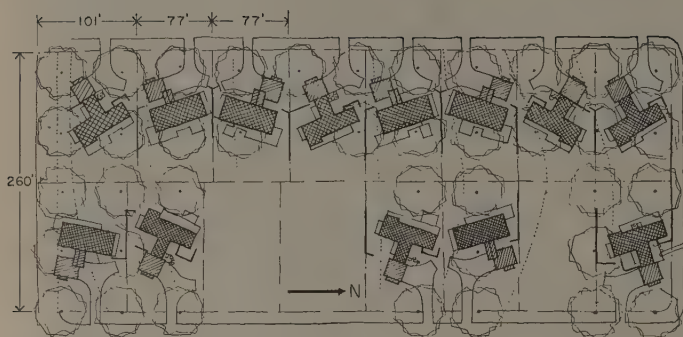
For check purposes, another example is shown by dotted line B, which predicts the operating cost if this house were in St. Louis—a city of less prolonged hot weather than New Orleans. This assumes the same 20,500-Btu 24-hour cooling load and the same 21,600 Btu capacity air-cooled unit. The method used is exactly the same as in example A (above). Because St. Louis suffers fewer degree-days (813) than New Orleans, has a lower mean design temperature, and has a 1.5¢ power rate, operating cost comes to \$52.

Finally, example C shows how operating cost is predicted to be \$36 a summer for the \$15,500 New Jersey house shown on p. 154.

Cooling profile of 15 cities

City	Degree days	Outdoor design	Mean outdoor design	Power rate cents/kw-h
Atlanta	924	95°	86.0°	1.3¢
Charlotte	544	95	86.0	2.0
Dallas	1,711	100	89.5	1.65
Detroit	430	95	85.5	2.25
Houston	1,483	95	88	1.5
Jacksonville	1,483	95	86.5	1.5
Little Rock	996	95	87	1.5
Nashville	746	95	86.5	0.5
New Orleans	1,519	95	88.5	2.0
New York City	400	95	88.0	2.0
Oklahoma City	894	101	90.5	2.0
Richmond	1,421	95	87	1.5
St. Louis	813	95	85.0	1.5
Syracuse	304	93	84.0	2.0
Washington	497	95	86.0	1.62

Power rates given cover electricity only, exclude "demand" charge tacked on in some cities just for air conditioning. This charge varies with the size of the cooling unit and must be added to predicted cost in cities where it is levied.



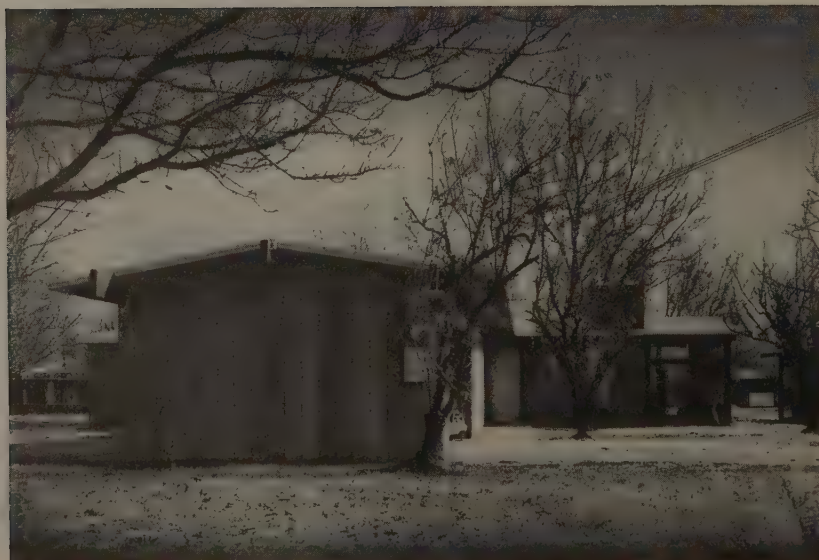
Staggered siting gives variation, saves trees. Seven houses are like the model at right; the other six have a rectangular plan, at same price.

**Behind the handsome facade
of this NAHB prize winner is . . .**



Photos: Julius Shulman

A four-zone plan

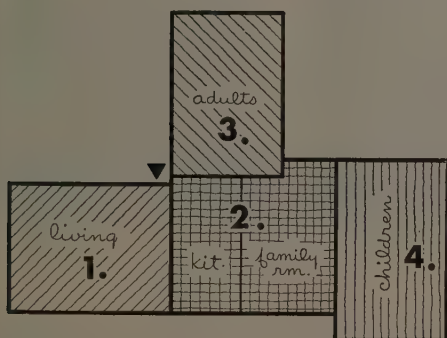


LOCATION: Northridge, Calif.
BLUE RIBBON CONSTRUCTION CO., builders
SMITH & WILLIAMS, architects
GIBRALTAR SAVINGS & LOAN, financing
SIZE: 1,400 sq. ft.
PRICE: \$16,500
Consumers will see this house in an
autumn issue of *Today's Woman*

Walnut grove surrounding the houses provides summer shade and privacy, adds beauty to the neighborhood. Lots are 77' x 135'. This solid wall is the end of the parents' bedroom; the wing at right is the living room. Vertical siding is California redwood, nailed over 15-lb. felt to studs. The interior walls are plastered.



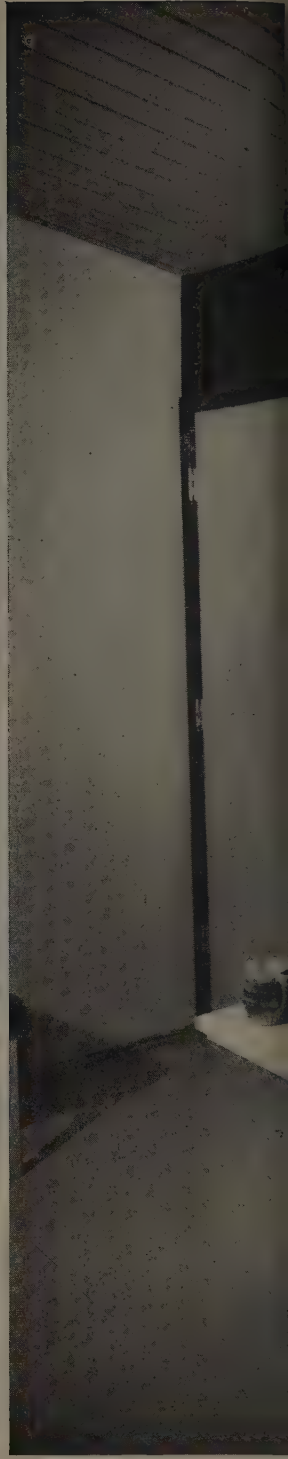
that makes family living easy



Because of its four-zone plan, this 1,400 sq. ft. house has what people pay more money to get: peace and privacy for each member of the family. Its separate areas are arranged so that the family living here will not feel crowded together.

The kitchen-family room zone separates the living room at one end from children's bedrooms and bath at the other. The parents' bedroom is a separate wing with its own bath. So this is a house which respects the children as well as the adults, gives the children two bedrooms that open up to the family room or playroom where they can carry on their own activities without bothering their parents.

Blue Ribbon Construction Co. of Hollywood built these 13 houses as their first project and had the good judgment to get designs from Architects Smith & Williams. The builders still have five houses unsold, entirely because of financing. Sales price is \$16,500; the FHA mortgage is only \$11,200. Conventional mortgages are \$10,500 with a second mortgage of \$3,500 running for three years.



"The family room makes this house really livable," says Architect Whitney Smith. It can be used for dining, play space, adult game room, laundry, study, TV or hobbies. Equivalent space is normally given over to laundry, breakfast room or to a bedroom hall.

Heart of this plan is



Flexible space in family room is an outstanding feature. Window louvers are high to put screens above eye level and to take warm air away at ceiling. Background fence is needed to create privacy from the neighbors because of the large windows in the house.

Centrally located family room



Children's bedrooms open off family room. Their bathroom is out of photo (at left). No space is wasted on the usual bedroom hall.



Washer and drier are in compartment behind these doors in family room and back up to bath. Thus family room becomes temporary laundry. Flexible space is an asset.



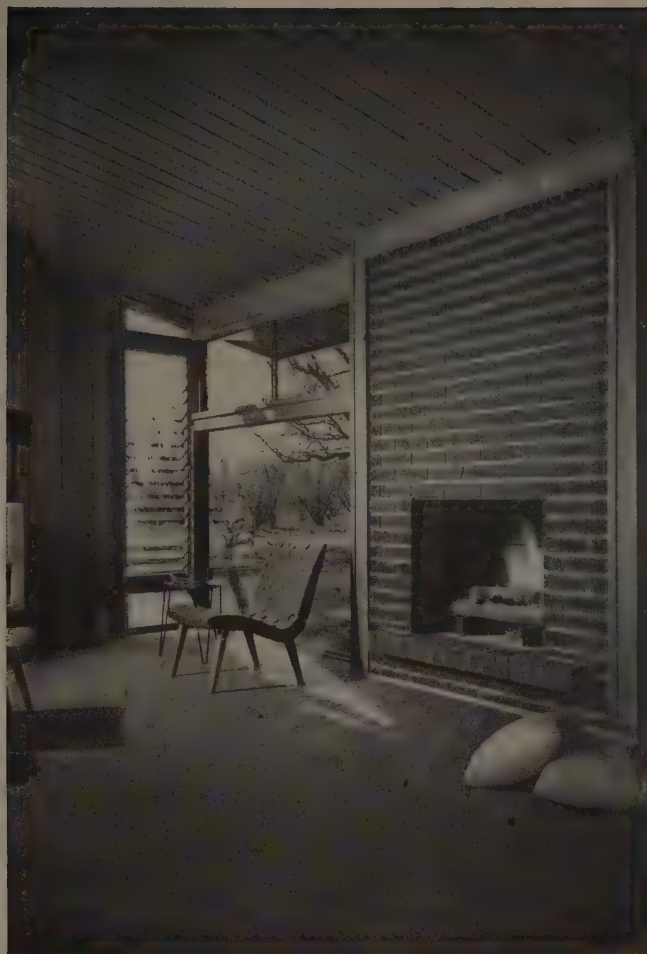
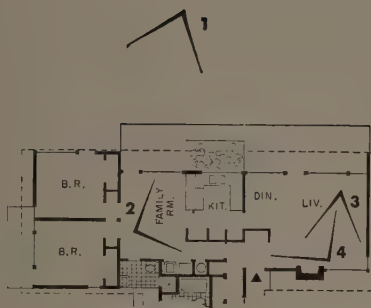
1. **Post-and-beam facade** is divided into a succession of almost square panels. Each panel is strongly outlined, so that it doesn't matter if adjoining panels contain different materials: the dominant, square outline makes them all look like members of one family, gives the complete facade coherence and unity.



2. **Inside** the same technique was used: dark posts and beams throw a strong frame around each interior element. Just as they frame glass, shutters, doors, painted panels or siding on the exterior (and pull them all together), so also they frame kitchen counters and storage walls, fit them neatly into a basic grid.

**Panelization of walls
brings order to
many diverse elements**





3. Even the fireplace is framed and made to look like another panel. This system makes as much construction sense as it makes design sense: with panelization of houses on the increase, the "panel look" is sure to become more and more prominent in the next few years. The Japanese have produced houses with the "panel look" for centuries—and have done it with a great deal of beauty, too.

4. The living room fits into the grid as gracefully as the rest of the house. Builders who want to give their houses a wealth of different materials should study this house carefully: a jumble of surfaces, textures and colors doesn't make for richness—it leads only to "Banana Splits." But if you organize this jumble by superimposing a panel grid, you can get neatness as well as variety.

Will government displace the mortgage banker?

► Wallace Moir, vice president of the Mortgage Bankers' Assn., forecasts it will—unless today's trends are reversed

► To save private lending, Moir urges modernization of state laws on foreclosures and loan-to-value ratios

IN THIS MONTH'S NEWS

(see pp. 33 through 54)

Rising restrictions on small homes and subdividing worry builders so much that NAHB asks FHA insurance for schools

Housing bill hearings reveal builders closer to labor views than to lenders; nearly everybody finds fault with FHA Sec. 221

Homebuilding picks up spring momentum and heads for a big 1.2 million house year

Mortgage money gets so plentiful that lenders begin scouting the nation for good loans again

Curt Mack quits as assistant FHA commissioner in charge of underwriting to head Baltimore firm

Is the government now so far into the home mortgage finance field that private mortgage bankers stand in peril of becoming extinct? If private lenders vanish, will private builders perish, too?

One man who thinks so is white-haired Wallace Moir (rhymes with lawyer), 53-year-old Beverly Hills, Calif. mortgage broker who is vice president of the Mortgage Bankers Assn. of America and its nominee for president next year (see p. 47). In a logically reasoned speech that managed to avoid the tiresome clichés of viewing with alarm, Moir set forth his opinion last month before MBA's southern mortgage clinic at New Orleans. Because of Wally Moir's prestige within and without the mortgage business, his convictions could mark a milestone in policy-shaping not only for MBA but for other housing industry groups as well. Said Moir:

"Every year the scope of government's responsibility and the range of its activity in the home mortgage business increases. We came to expect this under a Democratic administration. We are now learning that the same thing is to be true under a Republican administration. . . . The FHA of 1934 was merely an auxiliary instrument of the private mortgage market designed to aid in spreading the risk and restoring the confidence of a demoralized industry to make its own decisions. The FHA of 1954 is an instrument of government policy. . . . There is a steady drift away from concepts of sound credit as determined in the market to concepts of credit based on the borrower's inability to measure up to the standards of the market. The provisions of the pending legislation which create both a special class of FHA loans for families unable to borrow otherwise and a government facility to make funds available [for them] are another long and very ominous advancement of this tendency. Never before, outside the realm of public housing, has a welfare criterion for credit been made so explicit in government."

Euthanasia and suicide? As Moir saw it, this "drift toward a welfare basis for credit" means the government must constantly take over more details of mortgage financing and, eventually, of homebuilding itself. First, because it insures the lending risk, government decrees what risks to take. Then, because government holds the bag, it will impose its judgment on who gets the money and what kind of property. Even now, warned Moir, if it decides some people need homes more than others (as implied in the proposed FHA Sec. 221), "it can and will turn its powers" to forcing private industry to build them.



Cal-Pictures

MOIR

Charged Moir: mortgage bankers in cooperating with FHA and VA programs make a mistake if they surrender their responsibility for mortgage underwriting, leaving government the judge of value, credit and risk. "In so doing," he said, "the mortgage banker may be practicing on himself a form of euthanasia, a gradual and not unpleasant method of self-extinguishment. With his primary function of responsibility taken from him, he falls into the roll of an agent or securities salesman. This is a tenuous position, because it is one that may also be exercised by an employe [of government]."

Look at the record. Were such fears far-fetched? Moir pointed to farm mortgage lending. After the government "carved out a substantial domain in farm mortgage lending through the National Farm Loan Assn. and Land Bank System," he noted, "it was only by a phenomenal feat of adaptation to a changed environment that mortgage bankers were able to find survival in the urban field."

No less than mortgage bankers who follow the lure of easy FHA-VA profits, said Moir, do "homebuilders seem also determined upon self-extinction." He continued: "To a homebuilder, easy credit has an almost irresistible appeal, and, no matter at what cost obtained, he is likely to be for it. Full guarantees, protracted amortization, low interest rates, government credit supports all look good to him. . . . But the cost . . . may be greater than he counts. He should realize that, as government displaces the function of the private lender to forward its objectives, it will also move in on the private builder." The method: more control over design and construction systems, prices, warranties. "In the end," said Moir, "the government may find this a complicated way of doing business and resort to hiring its own contractors, after the manner of most British and nearly all continental home building today. Private building cannot long exist except on private credit."

How to save private lending. Moir conceded that FHA came to life because "our conventional loan system is not too well adapted" to modern housing needs. Moreover, he said, FHA has demonstrated that with loans amortized faster than homes depreciate, it is safe to lend more money on a house than most state laws will permit. FHA has shown, too, that mortgage money must "flow readily" to capital-shy areas to sustain a big volume of homebuilding.

Yet—perhaps because FHA for 20 years has provided a crutch to permit capital flow and high loans—the conventional mortgage lending system across the nation is as archaic today as it was in 1930. Cried Moir: "Over half our states maintain foreclosure laws that add both to the expense and the uncertainties of realizing upon the security of a loan, while some have gone even to the extent of making a deficiency judgment actually unobtainable, or practically unenforceable." Leading campaigns to modernize state foreclosure and raise limits on the ratio loans-to-value is "probably the most important job mortgage men can do" to keep mortgage lending from becoming more and more under government domination, said Moir.

Forward into the past? Moir philosophized: "Because our social problems in housing are not yet fully solved, we are inclined to ignore how surely, if gradually, they are being solved. . . . Instead, with our eyes fixed only on the remaining problem, we rush heedlessly to take measures that offer the illusion of the quick result. We plunge into the demolition of acres of deteriorated houses in the midst of the worst housing shortage in our history. . . . We build new public housing at \$10,000 a unit for the least competent while ambitious and self-reliant people, taxed for this purpose, are forced to be content with much less, often built with their own labor."

All this, Wally Moir is convinced, means "we drop our dependence on a free market economy, which has pretty effectively demonstrated its ability to raise living standards, and adopt measures that at best may only slow up its progress or at worst may destroy both it and its fruits. . . ."

Amateur magician. Moir's views—broad, philosophical and forceful—reflect the deep convictions of a man who sums up the role of a mortgage banker this way: "We have the obligation to translate the earnings of the country into the most useful building projects in the public welfare."

Wisconsin-born Moir started to follow his father's career in life insurance, but confesses "I had no natural inclination toward it." Soon after graduating from Stanford University, he met a friend who was an appraiser for Metropolitan Life, watched him appraise some homes, liked the work and, taking advantage of engineering training, soon became an appraiser himself. By 1930, he was vice president of Pacific Mutual Mortgage Guaranty Co. and when the firm was liquidated four years later, Moir bought its mortgage business with

John Hancock Insurance Co. and founded the company that now bears his own name. In 20 years, Moir's portfolio of loans has swelled from \$4 million to between \$85 and \$90 million. Last year the firm handled new loans at a \$1 to \$1½ million a month clip for John Hancock, American National Insurance Co. of Galveston and Great Western Life Assurance Co. of Winnipeg. Only half his business is residential; Moir also arranged the \$13 million mortgage for Los Angeles' new Statler Hotel. Although his wife, Phyllis, is the daughter of A. N. Kemp, president of Pacific Mutual Life Insurance Co., Wally Moir notes quietly that "we have never done a penny's worth of business with them."

From college baseball (third base), Moir has now switched to paddle tennis at the

Bellaire Bay Club and golf (14 handicap) at the Los Angeles Country Club. He is a devout Christian Scientist, served three years as a reader—the maximum the church allows.

As a boy, his ambition was to be a professional magician. "I don't think I ever really lost the idea," he recalls, "until I had to foreclose on one of the world's greatest magicians. There he was, seated across the desk from me, completely helpless. And in a situation like that, he couldn't produce anything."

Wally Moir has settled for becoming a skilled amateur magician—much in demand at parties both for his legerdemain and for his wit and charm.

If mortgage bankers are headed down as perilous a road as Moir believes having a magician leading them seems like a fair idea.

Chicago public housers develop FHA-blessed plan to mix public housing, rehabilitation

Chicago public housers came up with a scheme that blended the public housing that builders and realtors hate with the rehabilitation they love.

Instead of blasting entire slum neighborhoods off the map as New York and most other cities now do, Chicago's "Rockwell neighborhood plan" would demolish only the worst blight and let private operators repair the rest. The plan, 18 months in preparation, would mingle high-rise, public-owned apartments with remodeled two- and three-story buildings. The small buildings would remain under private ownership if the owners agreed to fix them to standards public housers set. If they refuse, the Chicago Housing Authority would condemn their property, remodel it and either operate the units directly as public housing or resell to private operators. The entire area would be re-landscaped, with more parks and playgrounds. Through streets would be turned back to provide quiet, traffic-free loops.

The 26 acre neighborhood involved—bounded by Monroe St., Western Ave., Van Buren St., and Rockwell Ave.—is one that the Chicago city council approved for total razing and redevelopment in 1950. Under the new plan, some 150 buildings would be torn down to make room for 1,055 public housing

units. But 135 buildings with 300 units would be left as is in private hands or rehabilitated.

All in all, the Rockwell plan was loaded with political sex appeal. It dovetailed with the Eisenhower emphasis on a broad approach to urban renewal. It would (said proponents) reduce the fearful cost of slum surgery. It cleverly put public housing in a pump-priming role in fighting blight.

PHA officials in Washington, with their usual turtle-pace, had not yet approved the plan—or allocated Chicago enough public housing units to carry it out. But John Nystul, technical assistant to FHA Commissioner Guy Hollyday, flew out from Washington to see it and called it "a national pattern for urban renewal." He predicted such combination public and private efforts could so bolster the value of property in the neighborhood that owners of the old buildings would have no trouble in getting FHA remodeling loans—presumably under the proposed Sec. 220. Said Nystul: "This looks to me the best example of how the various government agencies can work for a common goal. And if it works... it may well provide the example for similar developments."

Commented one NAHB leader in rehabilitation: "This is doing rehabilitation the easy way. We're trying to do it the hard way."

ROCKWELL PROJECT WOULD COST \$15 MILLION, END SLUMS NOW HOUSING 700 FAMILIES





"Like the power to tax, the power to appraise is the power to destroy, to prevent, to discourage." Round Table, H&H, Mar. '54

Handsome project gets ax from Connecticut VA: "Go to California if you want such house say appraisers, devaluing houses as much as \$3,450

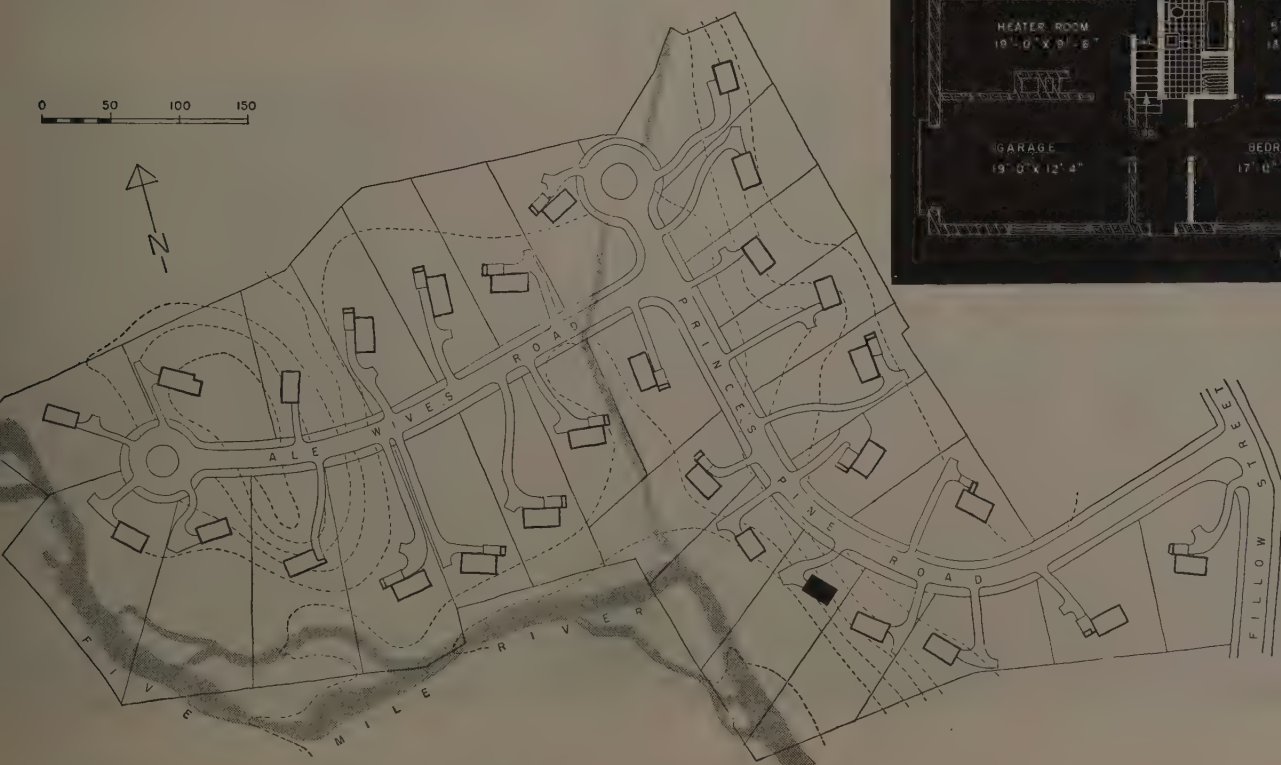
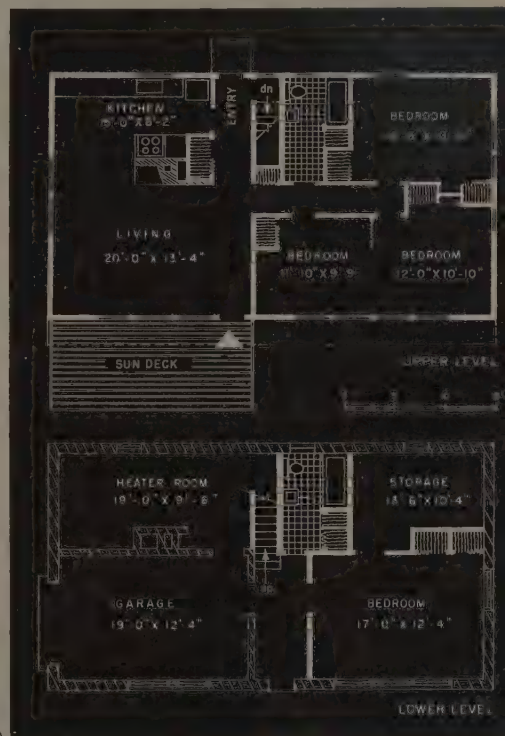
Last July Builder William Nathan finished his model house in Norwalk, Conn., 41 miles north of New York City, sent news releases and a modest advertisement to the newspapers and was pleasantly surprised to sell 20 of his 29 houses in the first ten days. Prices were \$18,000 to \$23,000.

Buyers obviously liked his uncrowded, contemporary houses and his big hillside lots, a third of which bordered a pleasant stream where there could be swimming holes. As most of his buyers were veterans, Nathan asked the Hartford VA office for a certificate of reasonable value and prepared to do business with VA.

But the VA did not want to do business with Nathan. Week after week went by with no word. After three months and some polite prodding by Nathan, the VA announced valuations which were from \$1,100 to \$3,450 under sales prices that veterans had agreed were a fair value. The VA told Nathan he should sell his 29 houses for exactly \$50,700 less than his total sales figures!

Since last November Nathan has made three new submissions to Hartford plus a request for a review and adjustment in Washington, where he sent an elaborate presentation to support his case and where he received help from NAHB's Chris Christenson. But Washington backed the Hartford decision. As a result, all but two of the veteran buyers have switched to FHA, paying 20% to 30% down instead of 10%, and undertaking to pay some \$1,400 more in higher interest over the life of their mortgages. Two veterans had to drop out.

Hillside house plan (below) one of two offered by Nathan carries a big sun deck toward the view. Two one-story plans make this with paved terraces. All houses have fireplaces, living-dining areas ranging from 296 to 342 sq. ft. Activities room and bath on lower level are extras. Selling prices: \$18,000 to \$23,000.



View, exposure, privacy—plus fine stands of trees—are dividends of wise siting

Should VA be allowed to have a design dictatorship? No builder wants to be told by the government that he must or must not build a certain style of house. Yet in effect the Connecticut VA has told Nathan and his buyers that they cannot expect VA financing on these contemporary houses.

Nathan is sure his low valuations are due to his designs. VA has accepted his lot prices. There has been no serious effort to disprove his cost figures, which he prepared with great care and had certified by a public accountant. In fact on about half his cost items which a VA inspector went over, the VA had given him a higher allowance than his own figures.

But about his designs the VA grumbled that people who want houses like that should go to California. "In New England we should have Cape Cods, colonials and split levels."

One specific complaint voiced to Nathan was that his houses would have poor resale value because they appealed to too few people. Yet neither the mortgage broker nor the bank handling the financing is worried about resale. Said Lester C. Persson of Lomas & Nettleton in Stamford, who handled the brokerage and who finance more new construction in that area than any other firm: "When a project like this sells out in two weeks and a half we don't worry about resale. We thought this was a good buy or we would not have financed construction."

Two impartial appraisers valued Nathan's houses at more than his selling price and one flatly said he was selling them too cheap. To the credit of FHA, it valued his houses at the sales price.

On the subject of resale values, the members of H&H's October Round Table said: "Ten years from now the market acceptance of houses whose plan and design were 20 years out of date when they were built will surely be much lower than the market acceptance of houses up-to-date when put on sale."

Houses fitted to their sites. Nathan sold 15 of his one-story designs and 14 two-story houses on hillsides. Designs and siting are by his wife who studied architecture at the University of Michigan and who has been a designer in architects' offices.

"We try to get three things," said Nathan, "view, exposure and privacy. We attempt to place each house so that it gets the maximum of all three. That implies staggering the setback, considerably rearranging and in some cases changing window locations.

Because of our panel system we're able to interchange panels so that the high windows are on the north or where they are needed for privacy, and the big fixed glass areas to the south or the view. We always preserve the trees, spending two or three hours on a site maneuvering to save a particular tree or clump of birches and still get the three things we are after."

Panel system works well. "The panel system is admirable," Nathan feels. "It lets us do all our cutting and prefabbing at one site. We then move the panels to the job and it takes about half an hour to erect all the walls. Because we've been operating on a post-and-beam system we've combined a trim with a structural member to give us a 4' x 4' column under the beam. It eliminates a lot of the interior trim that has to go on in a house after the sheet rock is installed. The whole window is framed in a combination of structural and trim members. We use a jalousie window that gives 100% visibility and opening and gives a great deal of flexibility. All our windows fit the 4' module.

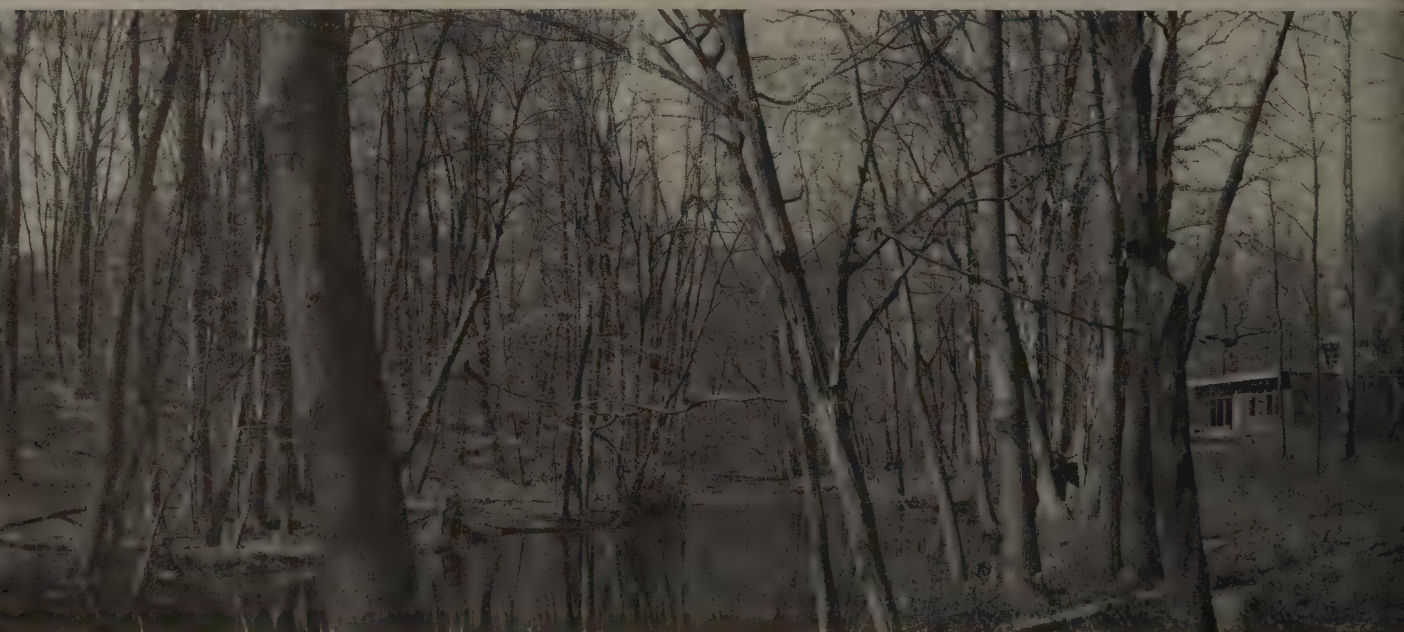
"The only complication is that we have to cut about 3/16" off the glass. We buy the hardware and our glass man supplies the glass. By buying only the hardware we eliminate a storage problem, as we can keep material for windows for 10 to 12 houses in the space we used to need for windows for three houses. But the question of a window for a modular system has me completely baffled. If you change the house module to fit some existing window you find nothing else is modular."

Houses have many variations. Because he had four different models and tried to fit each house to its own site, plus the individual desires of his buyers, Nathan found he was often turning out what amounted to a custom house. The most elaborate house has 9½ rooms, air conditioning and about \$2,000 worth of appliances. Buyers found the lower floor in the hillside houses gave them great flexibility. The development should be finished in another month; then Nathan will move on to a somewhat lower-priced group of houses nearby.

Nathan's difficulties with VA cost him a great deal of time and money, kept his 21 veteran buyers stirred up and delayed his construction.

"The VA was set up to protect the veterans but in this case it lets them down. I'm doing more for these veterans than VA is."

Photo: Patry Carr Studios



The buyers say: "For two years we have looked at new homes all over Long Island, Westchester, New Jersey and Connecticut. We were delighted to locate Mr. Nathan's development because it is exactly the kind of house we would like to build ourselves. It offers many advantages not available today in mass-produced homes."

"We have spent five years looking at houses and we can truthfully say that these are closest to the type of home we have always wanted. We think the asking price is fair and equitable when compared with other houses which had GI financing."

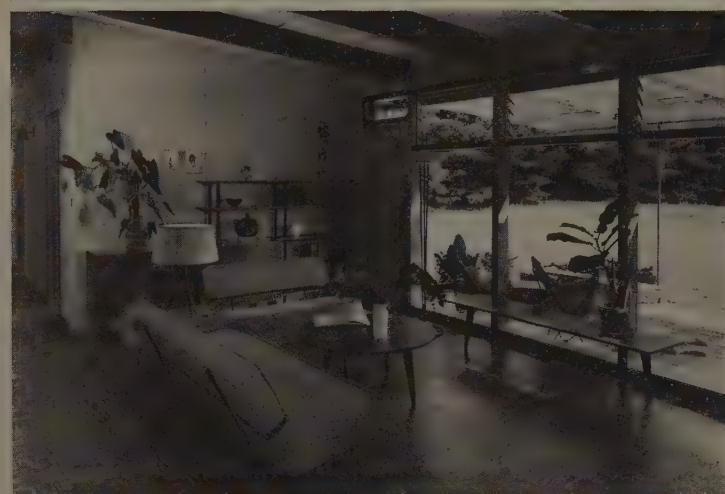
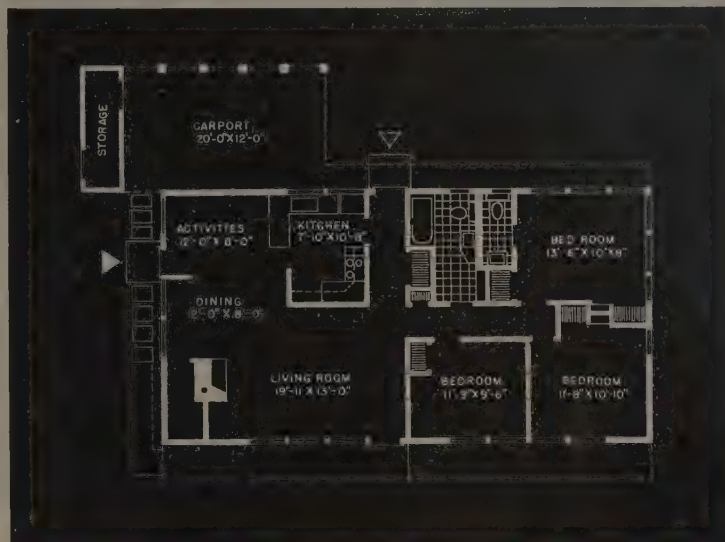
"When the project is completed the majority of houses will be close to what is commonly known as custom-built. It certainly won't look like many of the developments we have been through where a single type of outdated, uncomfortable house stretches on mile after mile without a single tree to break the landscape."

"We were extremely pleased to find a house in which somebody apparently cared about the workmanship."

"We believed we had found the home we wanted, but wishing to be cautious in an almost once-in-a-lifetime venture we brought in an engineer to inspect the house. He found it superiorly constructed. We sent the floor plan to my father, an architect and builder of \$40,000 houses. He was enthusiastic. The strongest sales talk came from an editor of "Interiors" magazine."

"We checked the house against the New York Architectural League's book and check list, *Before You Buy a House* (H&H, Aug. '53). The house bats a thousand."

"We watched the model house grow out of the ground, day by day. What we saw certainly helped us to make our decision. Later we liked the thought and care that went into placing our own house on the plot we chose, the consideration for land and trees, the variation in design for privacy and to adapt our house to its particular environment. In the light of today's market and prices, I believe your house carries a fair price. It is more than four walls and an overhead: it is a way of living."



How to give a slab house a basement equivalent is nicely demonstrated by the plan of this 1,200 sq. ft. house: 356 sq. ft. living dining area is supplemented by a small playroom; there is bulk storage space in the carport; special storage in the bathroom. Exterior is unpretentious, comfortable in its setting, with cedar shingles, lowered windows, low-pitched roof. Exposed beams and carefully shaded floor-to-ceiling windows add style to living area.



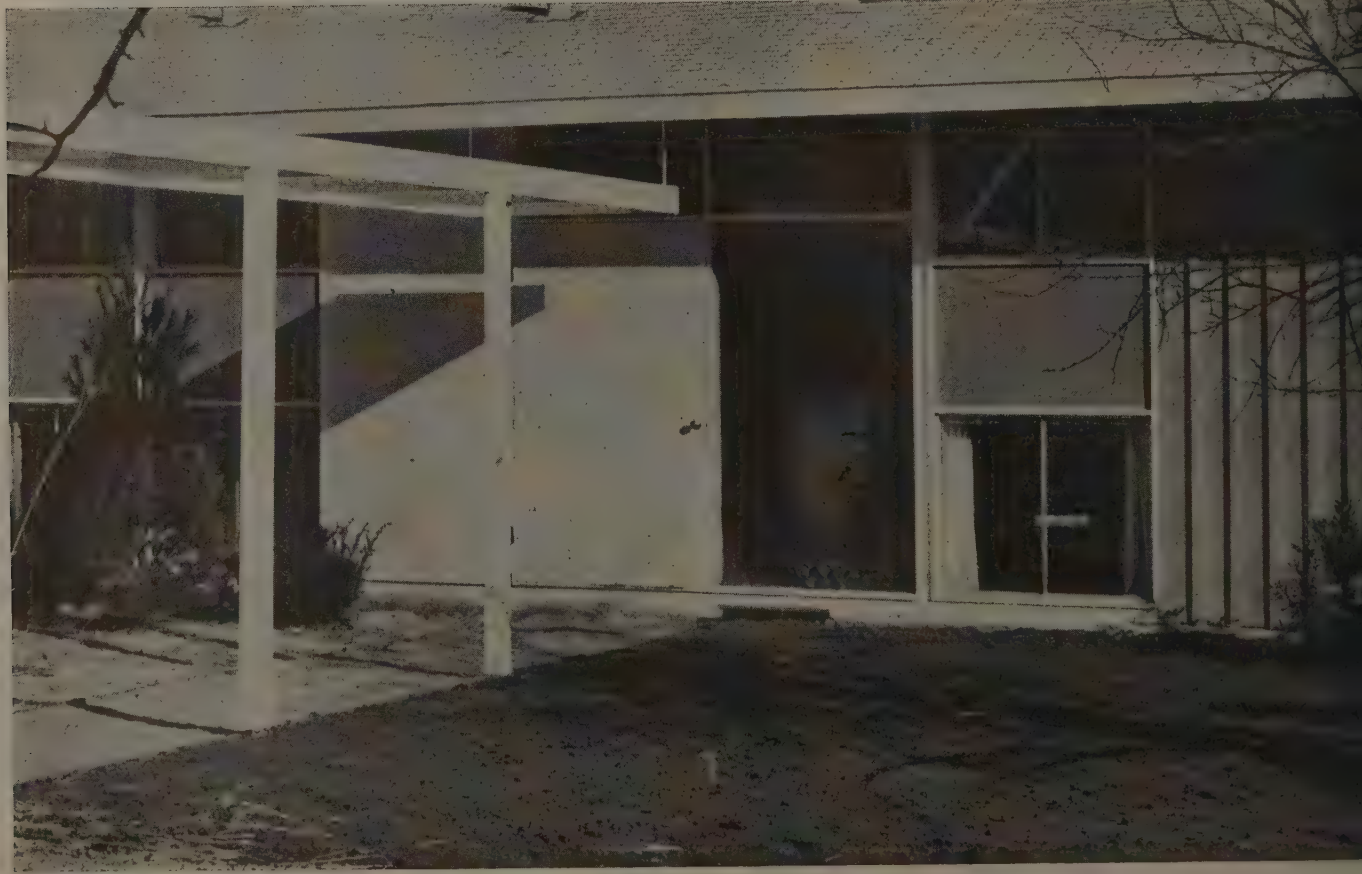
Five Mile River meanders past many of the houses, adds charm to the wooded surroundings



Damora

Today's millwork... this way

Ben Schnall



**A 14-page report
on HOUSE & HOME's survey of the millwork industry
its present production
and its future opportunities**

Hundreds of architects, builders, millwork manufacturers, jobbers and dealers wrote to us to comment on the original article in the Sept. '53 issue of HOUSE & HOME. It has been impossible to thank all of them individually, but without their help this article could never have been written.

Among those who were particularly helpful to the editors, and spent considerable time assisting us in the preparation of the present article, were: the Small Homes Council of the University of Illinois; representatives of the redwood, ponderosa pine and other trade associations; a number of leading millwork manufacturers; and many other manufacturers, jobbers and dealers throughout the country. Needless to say, they are not responsible for any of the conclusions presented on the following pages.

—THE EDITORS.

Last September, HOUSE & HOME reported that many US house architects were using special window and door millwork rather than less-expensive stock units, because, they said, they could not find any stock millwork that suited their particular needs. Even for volume-built houses, these architects were reported designing special millwork profiles and special frames instead of going to local lumberyards for stock materials.

In documenting this report, HOUSE & HOME published the special millwork details used by several dozen of the best known house architects. These details revealed a second interesting point: whether designed for Florida or for Maine, for Illinois or California, the details were all startlingly similar.

And this suggested a third thought: it might be easy to develop a very profitable new line of stock millwork from a composite of these details.

Some millwork manufacturers indicated immediate interest in producing such new profiles—as soon as architects and builders could agree on just what they would like.

Other millwork manufacturers were skeptical. They suggested that only a small minority of *avant-garde* architects might be interested in such a line, pointed out that their mills were very busy satisfying a wide demand for current stock items.

For the past six months, therefore, the editors of HOUSE & HOME have gone out to find the answers to these two questions:

1. Can architects and builders agree on what type of new millwork they want? and . . .
2. Is there really a volume demand for such new millwork?

To answer the first question, HOUSE & HOME subjected many of these new details (including a tentative composite of them) to the criticism of scores of architects, builders, millwork manufacturers and lumber dealers. The results of that investigation will be found on pp. 150-153.

To answer the second question—is there a volume demand?—HOUSE & HOME polled a random sample of 1,000 house architects and 500 volume builders. The results of that poll are documented on the next four pages. Here are the most important:

When asked if they would use the kind of millwork illustrated in the Sept. '53 issue of HOUSE & HOME, in the event that it was made available as a stock item, architects and builders said "yes"—by almost five to one.

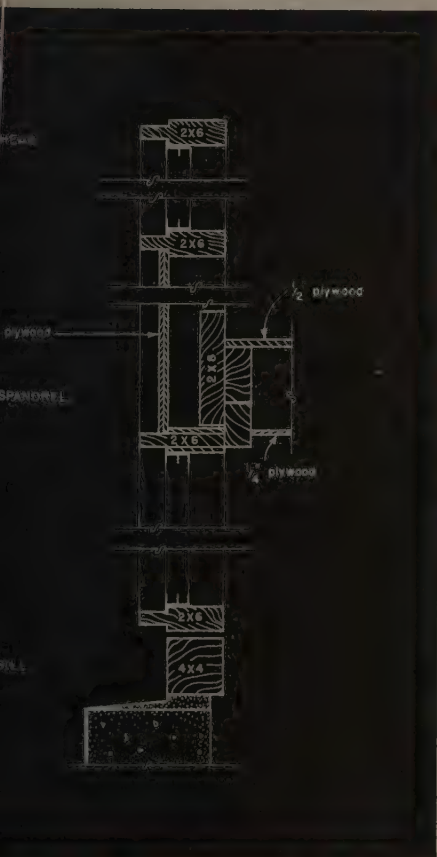
When asked whether they thought there was a "real market" for this type of modern millwork, about 76% said "yes"—only 13% said "no."

And when asked what type of millwork they themselves were using today—mostly stock or mostly special—fully one half replied that they used mostly special millwork.

These figures suggest that there is a very great, new opportunity for the stock millwork industry. We hope the industry will grasp it.

There are hopeful indications that it will. During the past few months (in some instances since our first story appeared) a number of important millwork manufacturers have introduced stock units that should go a long way toward meeting the objections of some modern architects and builders. We have shown these stock units on pp. 146-149. They seem to represent an important step forward in the development of this industry—a step that should have the support of thousands of US builders and architects.

or that ▾ . . . ?



In designing or building your houses,
do you use mostly stock window and door millwork,
or mostly special millwork?

ANSWERS:

mostly stock—42%

*Note: a breakdown of answers
received from volume builders only
shows that they use stock millwork two to one.*

Some notes on this survey

► Questionnaires went out to 1,000 house architects and 500 volume builders, selected entirely at random

► Architects and builders on the East and West Coasts, and in the South, agreed more frequently with HOUSE & HOME's millwork proposals than those in the Middle West

► Among the most enthusiastic supporters of the HOUSE & HOME proposals were leading *lumber dealers*, who are, of course, in close touch with the market. Many agreed that contemporary design is beginning to sweep the country

► Structural use of millwork (or the elimination of window and door millwork altogether) was most frequently advocated by architects and builders on the West Coast

► Many architects and builders suggested that stock units should be more closely integrated with commonly accepted systems of modular house framing—e.g., 16" o.c. stud framing, 4'-0" panelization, 8'-0 3/4" ceiling heights, etc.

► Several complained that some standard double glass units are not dimensioned to fit into commonly used modular framing systems

► There were indications that some of the critical comments made by architects and builders did not take into account the considerable recent design advances made by the millwork industry (see pp. 146-147)

► Even the most critical architects and builders praised the high standards of workmanship and engineering maintained by leading millwork manufacturers. All they criticized—often vehemently—was appearance

"I use about 90% stock millwork. Occasionally a combination of glazed door and window wall requires special millwork. Your general arrangement is good but you would require at least modular variations in width and height. I think the market for the type of millwork you propose would be limited."

Brooks Cavin, AIA, St. Paul, Minn.

"This region of the US is not yet very enthusiastic about modern houses. There is some demand but it is definitely in the minority. We ourselves use 90% stock millwork. Special millwork is difficult to get—as desired. Stock designs have better details and greater accuracy."

Richard E. Bishop, architect, Indianapolis, Ind.

"Not over 25% of our work is contemporary. The balance is conventional enough so that stock mill patterns and frames have been satisfactory. This percentage is shifting more in the direction of contemporary."

J. C. Nichols Co., builders, Kansas City, Mo.

"The average millwork manufacturer is not willing to assume, as you implied, that stock millwork is old-fashioned and out of date. I am sure that the millwork industry and the millwork jobbers, the retail lumber dealers and the great majority of the builders in this country would not agree with that premise."

Robert H. Morris, general manager

Ponderosa Pine Woodwork Assn., Chicago, Ill.

"If the low-slung, rectangular-lines, large-glass-area type of architecture is going to supersede the heretofore conventional type of dwelling, the transition will be very gradual, confined largely to families able to buy a large lot site and desirous of having the 'new.' . . . The overwhelming majority of dwellings [today] are built from stock plans."

Adolph Pfund, secretary

Woodwork Jobbers Service Bureau, Chicago, Ill.

"We try to use stock window and door millwork. It works out nicely 80% of the time. Your houses generally are located in warm and mild climates. They are not suitable for a cold climate. Why don't you explain that California homes are not suitable in other places?"

James S. Frankel, AIA, Lexington, Ky.

"I use stock millwork only because I want to utilize stock thermal glass sizes, which are sized to fit obsolete sash and frames. We frequently detail special millwork in this office to 'circumvent' such inept sizing by the glass companies."

John Vincent Anderson, AIA, Woodstock, Ill.

mostly special—43% half and half—7% no answer—8%

Photos: G. M. Ryan Studios, courtesy Andersen Corp. and R. C. Lautman

"We use no stock window and door millwork. Since our homes are of contemporary design, most of our window units are structural and as such require special design to fit our particular needs. . . . HOUSE & HOME's millwork would require the education of builders to show them its value in their production. Certainly its use by us would be immediate if the cost is right. Your proposal seems to us a step forward. . . ."

Charles M. Searle, Searle Homes, Inc.
Colorado Springs, Col.

"I have not used a stock window in five years. I use window openings and frames as part of the house frame."

Caleb Hornbostel, architect, New York City

"We mill our own special sections. They are similar to those shown in your article. We have been using them for the past two years."

John J. Heltzel, designer
Hughes Development Co. Inc., Pampa, Tex.

"Our work is entirely with contemporary design and very little stock millwork is suitable."

Clyde J. Verkerke, builders, Falls Church, Va.

"We do not use stock millwork. We have been using details similar to those suggested in HOUSE & HOME since stock millwork . . . will not permit that contemporary look."

M. L. Bartling Jr., builders, Knoxville, Tenn.

"We use stock trim and millwork in about 0% of our houses. Special millwork is simpler and conforms to contemporary design. Stock millwork has been obsolete for years."

Betz & Bankemper, architects, Covington, Ky.

"We never use stock—always special."

Albert LaPierre, builder, Seattle, Wash.

"We use stock door millwork but very little (20%) stock window millwork. We use what is currently considered 'special' because no mill stocks proper patterns for 'modern' or 'contemporary' houses."

A. C. Hyde, builders, Peoria Heights, Ill.

"We use special millwork 90% of the time because most stock millwork is antiquated. . . ."

Charles W. Cunningham, architect, Atlanta, Ga.

"Stock millwork rarely is in keeping with contemporary design and is composed of too many parts, has little versatility and is expensive to put together."

J. Robert Bence, architect, Casper, Wyo.



STOCK: Architects Humphrey & Hardenberg used stock units in this glassed-in Minnesota living room.



SPECIAL: Architect Charles M. Goodman used special moldings in this panelized builder house in Wheaton, Md.

Would you use the profiles suggested by HOUSE & HOME *Sept., '53 issue, and pp. 150-153, this issue*
if they were available as inexpensive stock items?

ANSWERS:**yes—70%****no—15%** *no opinion—15%*

Note: a breakdown of answers received from volume builders only shows that they would use the HOUSE & HOME profiles by more than two to one.

"If I were able to get any of the HOUSE & HOME profiles I would be delighted. We have just completed a residence in one of the smaller towns near Minneapolis for which the millwork bid comprised 50% of the total cost of the building. As in the past we spent much time trying to find, and then educating, a builder to the same simple sections which you have shown."

Norman C. Nagle, AIA, Minneapolis, Minn.

"Each of our four local architectural offices is using designs similar to the ones shown, and it has been necessary for us to make them in our workshop. If you could get architects to standardize on certain designs, we are sure that through our dealer organizations we could get the manufacturers to introduce these in their regular lines."

Robert A. Dean, president
Red Mill Lumber Co., Traverse City, Mich.

"I cannot say enough for your idea of bringing into this world a good, standard, up-to-date millwork detail."

George R. Munkwitz, draftsman
Brunsell Bros., Lumber, Millwork & Precutting
Madison, Wis.

"As an architect, I strongly endorse your recommendations and sincerely hope you will carry on to a successful conclusion. As manufacturers of contemporary millwork, we appreciate your efforts in aiding our company and others who are perhaps contemplating entering the contemporary millwork business."

L. S. Emert, vice president
Solar Air-Flo Inc., Goshen, Ind.

"There would be many advantages if your suggested millwork profiles were manufactured out of redwood, with its durability and dimensional stability."

Kenneth O. Smith Jr., production manager
Warm Springs Redwood Co., Willits, Calif.

"We think that if stock milled pieces, especially rabbetted structural members, were readily available, they would be very useful to architects and builders, particularly in relation to the housebuilding industry where the highest standardization of parts is most likely to occur. . . ."

Keyes, Smith & Satterlee, architects, Washington D.C.

"As far as we are concerned, you are covering a very unusual type of house which is either designed for use in a big development or an individual home by an architect. In a big development, the millwork is made in quantities and run in long runs on molders, etc. . . . Thus it gets down to a very reasonable price. If the house is a one-time design by an architect, there would be so few of them in this area that it would not pay to carry stock millwork to meet their specifications. Of the 500 to 700 houses we sell a year, I think there are less than 50 that are designed individually by architects. The rest are taken from plan books or are built in large developments. . . ."

"What you say about the merchant builder is pertinent. We have been trying very hard to adjust our thinking and operation to this type of builder. However, there are still many small contractors and builders in this country who are building thousands of houses and who must be considered and catered to."

Elias W. Nuttle, president
The Nuttle Lumber & Coal Co., Denton, Md.

"Naturally, for millwork manufacturers to produce new designs, either in component parts or in unit openings at the lowest price, there must be sufficient volume. The panel-wall type of modern house, as of now, is in the minority."

Colman Dever, vice president
Ideal Co., Waco, Tex.

"I like my own designs best."

A. S. Higgins, architect, Bangor, Me.

"If a builder in our area wished to use shapes similar to those proposed by HOUSE & HOME he would have to pay only a nominal 'extra' to have them run off to order—and he would then have any other features he wanted."

Bettenburg, Townsend & Stolte, AIA, St. Paul, Minn.

"I don't think you will—and I hope you won't—ever get the architects to agree on which detail should be standardized. There is little enough difference as it is. . . ."

Van Evera Bailey, AIA, Oswego, Ore.

"The cost of changing patterns to those you suggest is negligible. Any millwork plant can change its patterns to conform to a customer's wishes in a matter of minutes and they are glad to do so. There is no extra cost for this on an order of about 5,000 lin. ft. or more in most plants. . . ."

Carl Peterson, Clear Pine Moldings, Princeville, Ore.

Do you think there is a real market for the type of millwork proposed by HOUSE & HOME?

ANSWERS:

yes—76%

no—13% *no opinion—11%*

Note: a breakdown of answers received from volume builders only shows that five out of seven feel there is a real market for this type of millwork.

"We have seen the new type of architecture take hold like nothing else that has ever happened in the past 40 or 50 years, until now we seem to be selling fully 50% of this type of home as against the other 50% assorted old-style houses. . . . We have had to buy clear and shop-grade redwood dimension stock and have it run off locally at considerable extra expense to us and to our customers. . . . We would like to give the mills quite a hard time about their reluctance to change to a modern stock design setup."

R. N. Marling, secretary
Marling Lumber Co., Madison, Wis.

"You are perfectly right: lumber dealers are behind on new profiles. We, for one, would like to do something about it."

W. Boyd Tyler Jr., president
W. J. Tyler & Son Lumber Co., Inc.
Cape May Court House, N.J.

"Speaking only for the Thompson Lumber Co., we do approve and endorse your new suggestions on the mill profiles. However, one of our staff does criticize the use of framing members as finish members. He recognizes that this is a tendency but points out that much more care needs to be given to material during construction than is usual, and in addition, the member usually has to be specially treated to make it acceptable on the finished job."

"I congratulate you on accepting the responsibility of aiming to get agreement from this diversified industry."

C. A. Thompson, chairman
Lumber Dealer's Research Council, Champaign, Ill.

"We can see how your campaign, if successful, could reduce the cost to the ultimate user. In fact in our own custom operation it would be less costly to use a generally accepted detail than to work out a new one each time."

Charles E. Wagner, vice president
Burnet-Binford Lumber Co., Indianapolis, Ind.

"There is no question that [we need] simplification in the many items of lumber and millwork that go into the building of homes. . . . The public certainly has a right to expect the building and lumber industry to move forward."

Paul V. DeVille, president-treasurer
DeVile Lumber Co., Canton, Ohio

"Your article is timely, accurate, sensible, challenging. As you know, my personal philosophy is that wood should be used with reason and care, not merely to increase its sale. Your article should forward this approach."

"In my area, where the predominating architecture is still conventional, builders prefer to have their millwork prefabricated and assembled in units for easy and inexpensive site utilization. Stock millwork for the older types of architecture is not made from clear grades of lumber, but from 'shop' or 'cutting' grades which contain short pieces of clear lumber between . . . imperfections."

"One of the very real services that HOUSE & HOME can perform would be to help popularize other than clear grades of lumber for the moldings and millwork in houses of contemporary design. If it were possible to incorporate the trend toward textured materials and rougher surfaces into modern architecture, then the lumber industry could make a real contribution to lowering costs of construction."

Norman P. Mason, trustee
Lumber Dealer's Research Council, North Chelmsford, Mass.

"We operate a line of lumberyards in rural communities—the largest being in the 20 to 30,000 population bracket. A great many of the homes in this market are not individually designed by an architect, but come out of home-plan books such as those furnished by the National Plan Service and similar organizations. In most instances, the type of millwork we furnish is determined by these plan books. Of course, we would have to carry moldings that fulfill the specifications of such houses."

"We are very mindful of the lack of coordination within the lumber industry, however, and would be interested in any efforts that are put forth to standardize on certain basic items. There is, of course, a sizable demand for the older type moldings in remodeling so that it would not be possible, obviously, to eliminate all the old patterns and still handle this type of business."

R. M. Dobson, vice president
J. F. Anderson Lumber Co., Minneapolis, Minn.

Is there anything new in STOCK millwork?

A lot of modern architects and builders seem to think the answer is "no." That, at least, is what HOUSE & HOME's survey indicated. Perhaps these architects and builders were right a few months ago—but as of Apr. '54 anyone who says that he cannot find stock millwork for modern houses is in for a few big surprises.

These surprises are both welcome and long overdue. The drawings on the next four pages explain why.

To find out what was new in stock millwork,

HOUSE & HOME asked nine manufacturers a simple question:



"Can you duplicate this modern, special-millwork window wall

using only stock units available today?

And if so, how would you do it?"

We think that the answers deserve careful study by all architects and builders who may have felt that special millwork was the only solution for them.

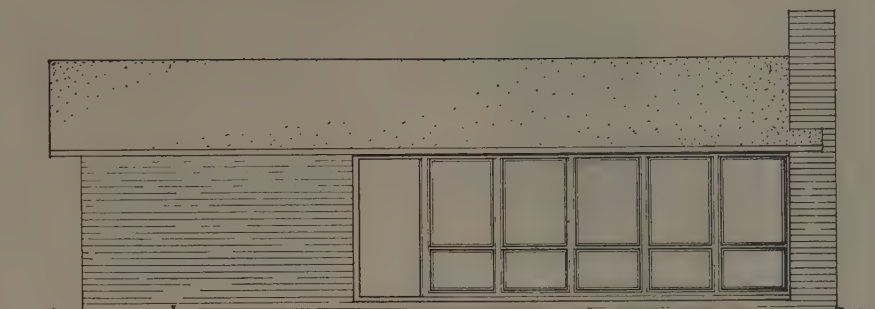
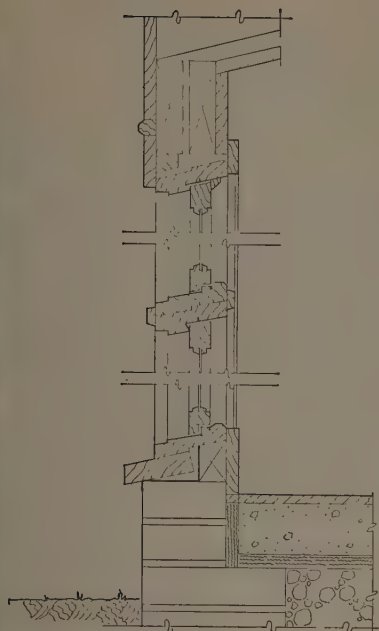
Here are typical details and an elevation of Architect Charles M. Goodman's window wall for a builder development in Hammond Hills, Va. Over-all height is 7'-4". There is a 3' x 7' stock door at left, and six fixed-glass panels over hoppers to its right.



This is the modern, special-millwork window wall we showed to nine leading millwork manufacturers.

The next three pages show how they would duplicate it, using only stock units available today

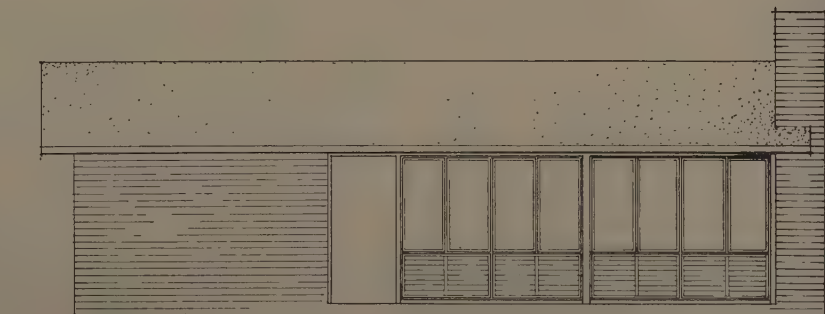
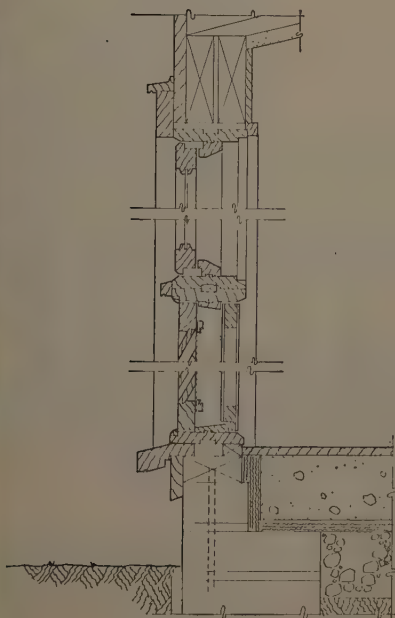
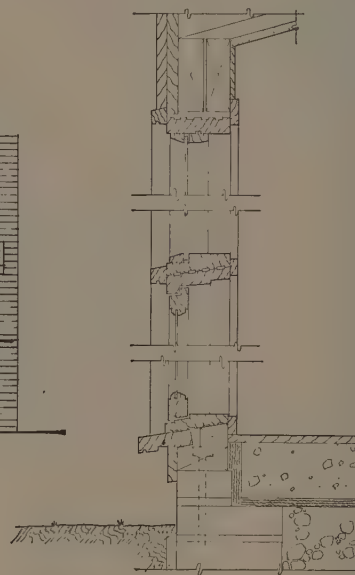
Note: prices submitted by manufacturers of these window walls proved to be subject to so many different local or regional influences that comparisons did not make too much sense.



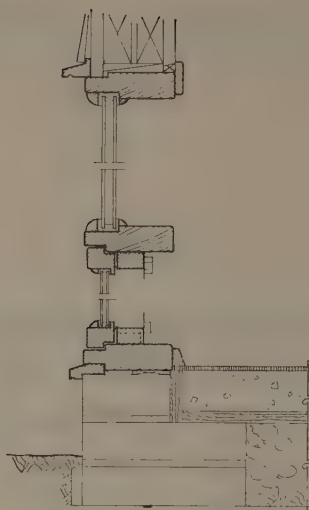
ANDERSEN CORP.: five panels between structural posts, each panel consisting of fixed glass on top, and a stock "Flexivent" hopper unit below. Unit is designed also for double-glazing and to take wood-framed screening on the outside.



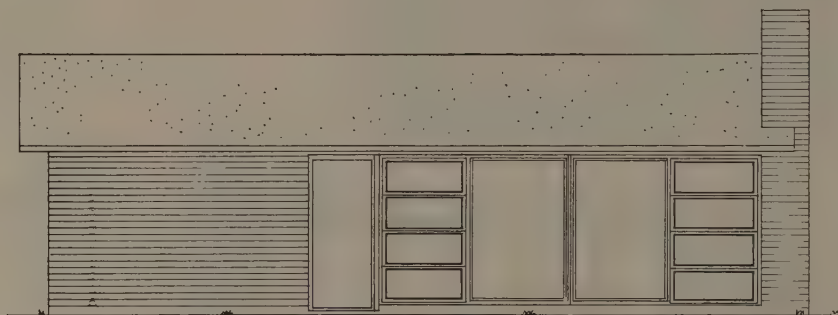
CARR, ADAMS & COLLIER CO.: five "Bilt-Well" awning-type units with fixed glass above. Units are available double glazed and with screening. This window wall is also nonstructural, hence the structural posts between some panels.



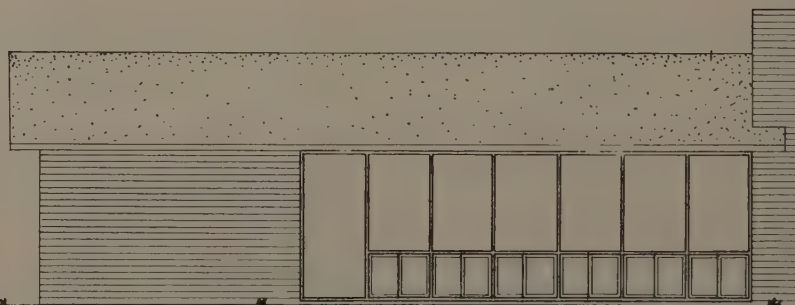
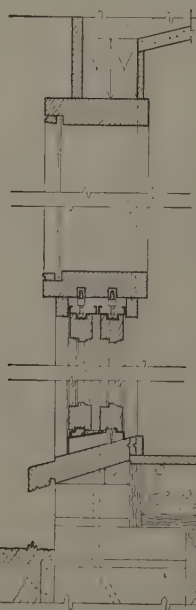
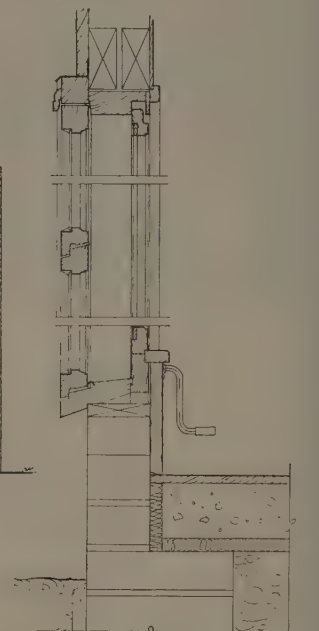
CURTIS COMPANIES INC.: several suggestions submitted by this manufacturer were similar to those shown elsewhere on these pages. Elevation and details reproduced here show interesting stock lower units manufactured as part of the "Silentite" series.



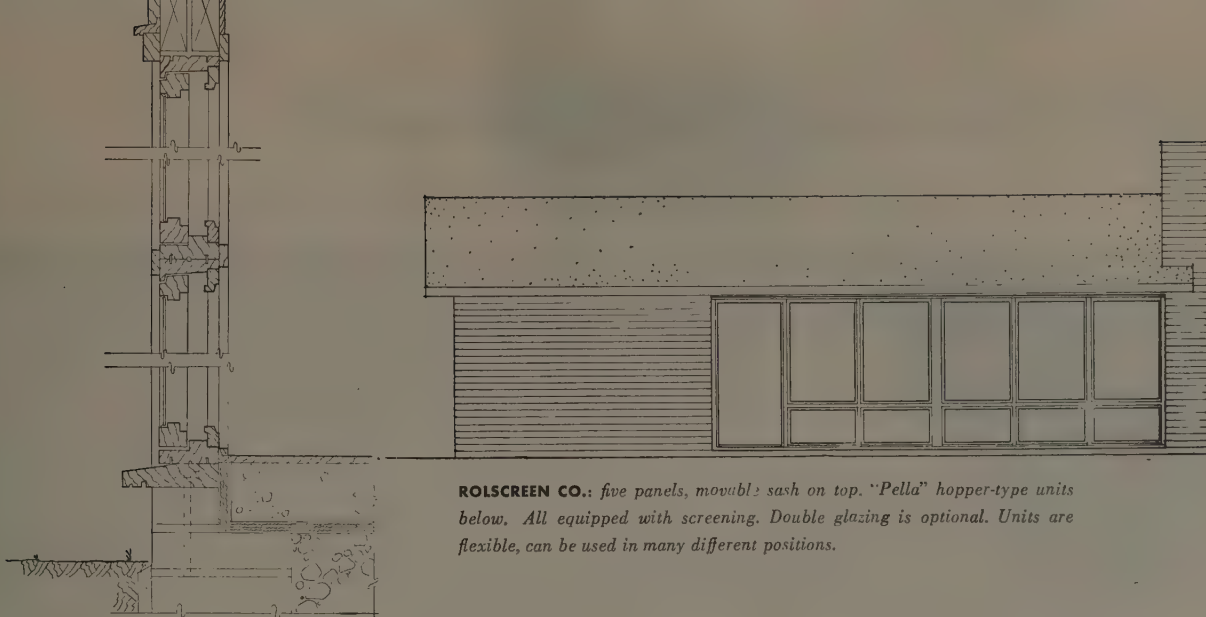
FABROW MANUFACTURING, INC.: the "Fabrorama" units are closer in detail to Architect Goodman's prototype than most other stock window walls. Most profiles are milled from 2" x 6" stock. Note unusual sill detail.



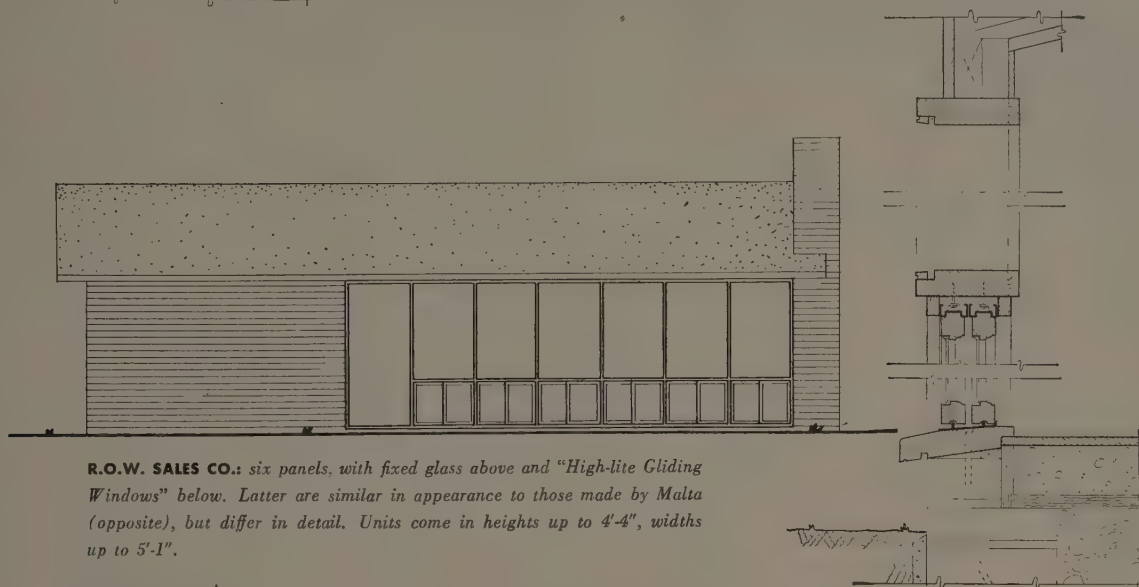
GATE CITY SASH & DOOR CO.: four panels—two fixed-glass units in the center, one awning-type unit on each side. These projecting units are crank-operated, have screens on the inside.



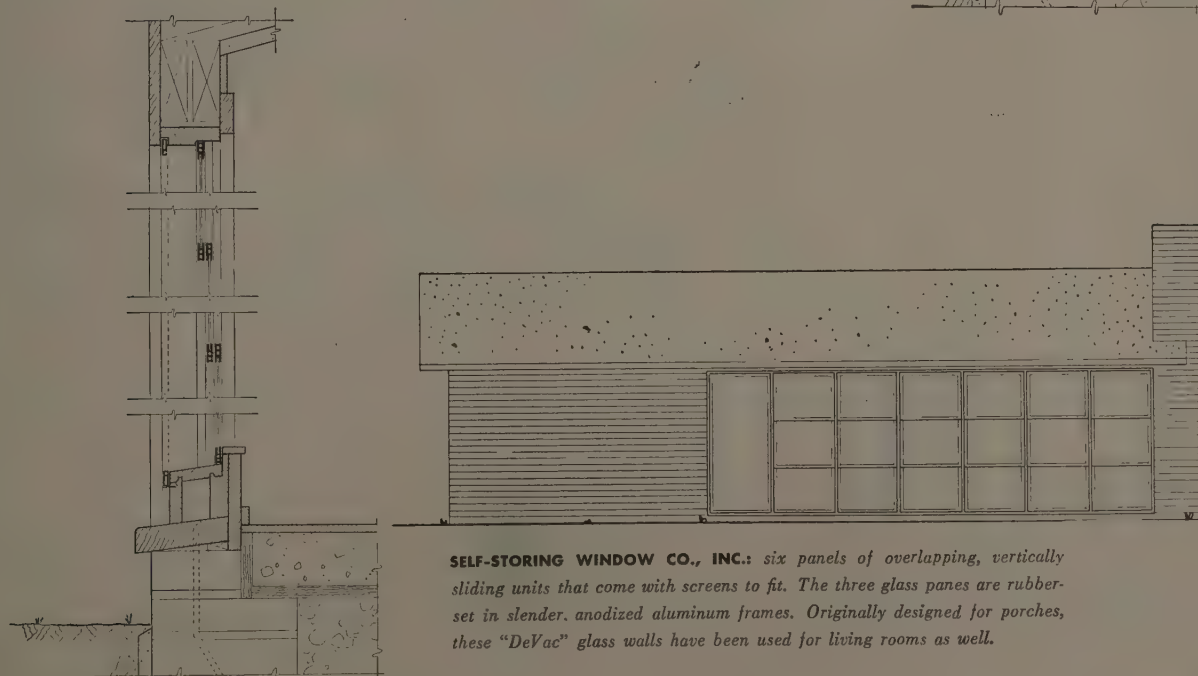
MALTA MANUFACTURING CO.: six panels, with fixed glass above and "Malt-a-Glide" sliding units below. The sliding windows come in various sizes, up to 4'-0" in height.



ROLSCREEN CO.: five panels, movable sash on top. "Pella" hopper-type units below. All equipped with screening. Double glazing is optional. Units are flexible, can be used in many different positions.



R.O.W. SALES CO.: six panels, with fixed glass above and "High-lite Gliding Windows" below. Latter are similar in appearance to those made by Malta (opposite), but differ in detail. Units come in heights up to 4'-4", widths up to 5'-1".



SELF-STORING WINDOW CO., INC.: six panels of overlapping, vertically sliding units that come with screens to fit. The three glass panes are rubber-set in slender, anodized aluminum frames. Originally designed for porches, these "DeVac" glass walls have been used for living rooms as well.

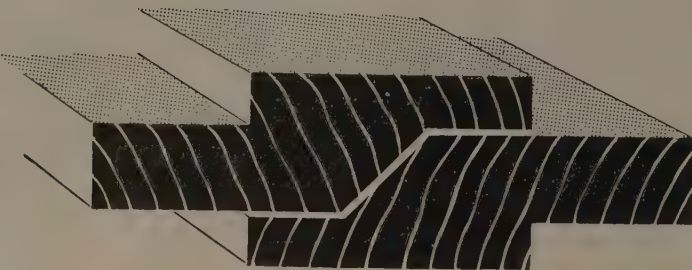
Is this the coming look in millwork?

The millwork details by Harold R. Sleeper, FAIA, shown on the next three pages, are the result of an extensive survey of manufacturers, builders and architects. The survey was undertaken to find some common denominator on which most modern architects and builders could agree, and which could thus be adopted by millwork manufacturers interested in a new and expanding market.

The suggestion of a single, simple profile, milled out of nominal 2" x 6" stock, was originally made by Glen M. Drew, architect, of Poplar Bluff, Mo., who has used this profile successfully in his residential work for some time. Mr. Sleeper's research indicated that the profile seemed to satisfy the majority of window and door conditions encountered in today's residential building.

In the vertical members, however, the profile appeared somewhat wasteful. For that reason Mr. Sleeper has included an alternate profile that could be used for all vertical elements. Further research may determine whether it makes better sense to standardize on one simple profile, or to cut and stock a series of different but related profiles.

In some parts of the country it may seem advisable to use a steeply pitched sill in place of the level profile (shown here). Any number of simple stock sills would fit in with the detailing system proposed here. However, a great many architects and builders are beginning to find dead-level sills entirely acceptable, especially when the wood has been properly treated in the mill.



Two possible approaches now seem to suggest themselves for future development:

1. It may seem advantageous, in the light of HOUSE & HOME's survey, for a millwork manufacturer to produce these profiles as lineal stock to be assembled into the required frames in local mills, according to the builder's and architect's specifications. Such lineal footage should be produced in larger mills because *proper* preservative treatment of most woods is absolutely essential to the success of this type of detailing. Generally speaking, only the larger mills are equipped to apply such treatment. "Proper" treatment means using oil preservatives that will not affect the dimensional stability of the wood. Water-borne preservatives will swell the wood—and since such swelling changes its dimensions, further kiln drying is required after treatment.

Whenever possible, pressure or similar treatments rather than the so-called "dip" process should be used to treat this lineal stock, for pressure or similar treatments will easily penetrate the entire thickness of these simple profiles. This is important, and the reason is obvious: Mr. Sleeper's details show certain conditions under which the basic profile might be trimmed off by the local mill (especially on the inside, in connection with a plaster wall finish), and such trimming would expose the core of the molding. Second, lineal stock will undoubtedly be cut off in different lengths by the local mill, and the end grain, being most vulnerable, must be protected. The only way to protect it is by "treatment in depth." Yet such treatment requires an elaborate installation and few small mills could afford its cost.

2. It may well prove possible for some millwork manufacturers to produce a line of stock frames, using the simple profile shown on these pages. Such stock frames should be dimensioned to fit into a 4" modular system. Both the Small Homes Council at the University of Illinois, and the Construction Department & Research Institute of the NAHB are well-equipped to suggest what standard frame sizes would make most sense in today's houses.

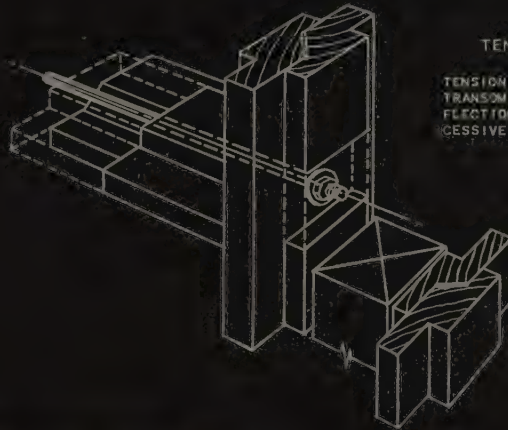
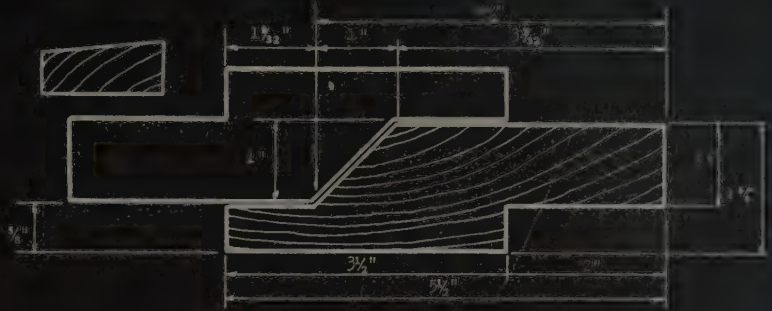
Manufacturers are unanimous in their opposition to the structural use of millwork. Mr. Sleeper's details assume that all frames will be prefabricated in a mill and inserted into the rough structure on the job. This opposition to structural millwork is based on two objections: first, the millmen believe that millwork used structurally tends to arrive on the job too early, and is therefore subject to serious damage in the course of house construction. Second, millmen point out that the whole trend in building has been toward greater prefabrication in the factory, and less field labor. Hence, they feel that the window that is made on the job is a step backward: it is likely to be poorly assembled, poorly engineered and poorly treated. Any builders and architects who remain unconvinced and still prefer to use their millwork structurally will also find our suggested profile suitable for such a system.

DETAILS FOR WINDOWS and DOOR MILLWORK

UNIVERSAL MILLWORK PROFILE

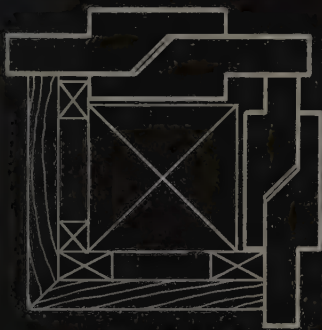


HORIZONTAL MEMBERS



TENSION ROD DETAIL

TENSION RODS MAY BE PLACED THRU TRANSOM PIECES TO DECREASE DEFLECTION OF TRANSOM UNDER EXCESSIVE GLASS OR PANEL LOADS.



CORNER POST



STRUCTURAL POST



MULLION



JAMB

VERTICAL MEMBERS



CORNER POST



MULLION



STRUCTURAL POST



JAMB

ALTERNATE VERTICAL MEMBERS

DETAILS FOR WINDOWS and DOOR MILLWORK

FLASHING IS OPTIONAL.
INTERIOR NOSE MAY BE CUT
TO FINISH FLUSH WITH
WALL.
WHEN HANGING DOOR, CUTS
MUST BE MADE TO FIT DOOR
FLUSH WITH WALL.
(SEE DOOR DETAIL 16-19)

HEAD 1

5

ADDITIONAL BLOCKING IS
NECESSARY FOR DOUBLE
GLAZING.
FIXED PANEL & FIXED GLASS
DETAILS ARE SIMILAR.
SCREENS OR INTERIOR STORM
SASH OPTIONAL WHEN
USING OUT-SWINGING
CASEMENTS.
PUTTY MAY BE USED IN
PLACE OF STOPS ON
SMALL FIXED GLASS.

JAMB 2

6

3

7

SILL 4

8

FLASHING AND METAL
DOOR SADDLE OPTIONAL.
(SEE 4, 8, 12, 15, 19.)

STEEL CASEMENT

WOOD CASEMENT



ELEVATIONS (ELEVATIONS BASED ON POSTS 8'-0" O.C.)

DETAILS FOR WINDOWS and DOOR MILLWORK

MANUFACTURERS SHOULD BE CONSULTED FOR SETTING REQUIREMENTS OF DOUBLE GLAZED INSULATING GLASS.

METAL SLIDING SASH INSTALLED SIMILARLY TO METAL JALOUSIE INSTALLATIONS.

RECOMMENDED AREA FOR 1/8" GLAZING
7.50. FT. MINIMUM
12.50. FT. MAXIMUM

DOUBLE GLAZING

JALOUSIE & SLIDING SASH

DOOR

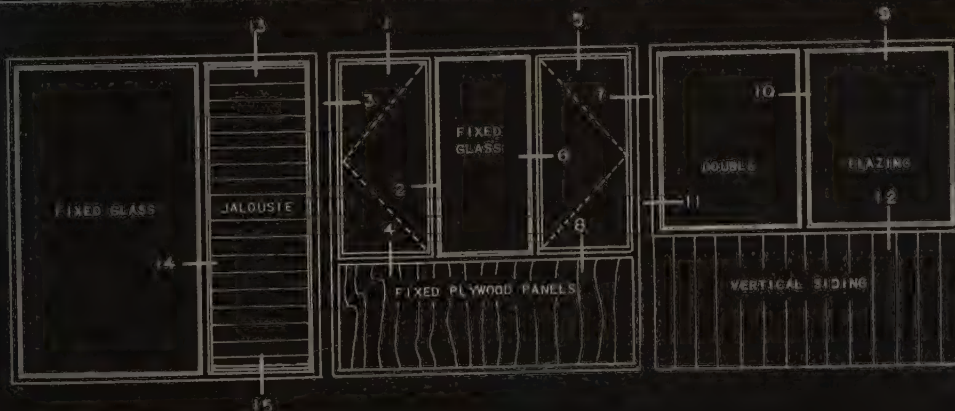




Photo: Ben Schmitt

This 1,117 sq. ft. prefab points up a variety of ways to give a small-house

LOCATION: Mahwah, N.J.
GEORGE NELSON & ASSOCIATES, architects
DAVE ZAMORE, builder
PRICE: \$15,500



use sales appeal. Designed by Architects George Nelson and Gordon Chadwick, for American Houses, Inc., the \$15,500 prototype (above) was put up in Mahwah, N.J. by Builder Dave Tamore on land worth \$2,200. Selling price will naturally vary according to geographical location and local conditions—from \$13,000 to \$19,000, says American. Main feature of plan (right) is the strategic location of the kitchen which gives a woman: 1) control over formal entrance; 2) control over terrace and its entrance; 3) control over family room; and 4) control over living room—all at one time and place.

Three good planning ideas

make three good selling points

1. furniture built into every room

Storage-wall pioneer George Nelson includes ideas that are practical for all houses: a divider storage wall with drop-leaf desk, toy closet in the room where children play, extra drawers and special-purpose built-ins—all of which cut down the amount of furniture a family needs.

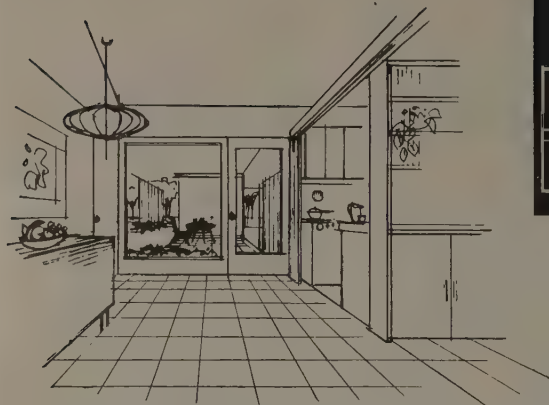
2. a versatile family room, first-rate for many uses

Next to the kitchen, this open area is strategically placed for informal meals, hobbies or housework. Furthermore, children can play here under the eye but not under the foot of their mother. And this room opens onto an outdoor terrace.

3. central air conditioning for \$36 a summer

This low operating rate—no more than the operating cost of two $\frac{3}{4}$ -hp window units—is the result of tight house design for air conditioning (p. 125). A brand-new design feature: the air-cooled condenser on the roof, inside a dual-purpose chimney.





Family room opens onto a planned terrace; for privacy outdoor storage shed fences it off from the street.



Big storage wall serves living area, includes drop-leaf desk. Note how living room borrows space from "hall."



Dressing table in bedroom between closets is built in to save space, boost living efficiency.

The sketches on this page clearly show how Architect Nelson divides his storage plan into three categories—guideposts that every builder can use:

Bulk-storage space: "everything from lawn mower to bicycle, and old bureaus" handled by the outdoor shed. Other bulk items can go in a special attic over the bedrooms with access through a ceiling trap door.

Conventional storage space, mostly for clothes, is squarely met by the use of seven big closets.

Shallow storage space that "can handle virtually everything else to be stored" is provided almost at one swoop by the 8' storage wall between kitchen and living room. With this kind of planning is a basement necessary?

Painstaking design cuts air-conditioning operating cost to \$36 a summer, strikingly low because America's designers followed through on all "Five top priorities for designing an air-conditioned house" (H&H, Aug. '53):

1. Roof heat load is cut sharply by a 3½" blanket of foil-backed insulation over the ceiling ($U=.07$) and by a 4" screened vent for attic ventilation which runs the length of front and rear overhangs.

2. Windows are shielded from sun by 36" overhangs, and they are fully weatherstripped. Since the house is designed to face north or south, window area was minimized on the hot east and west ends.

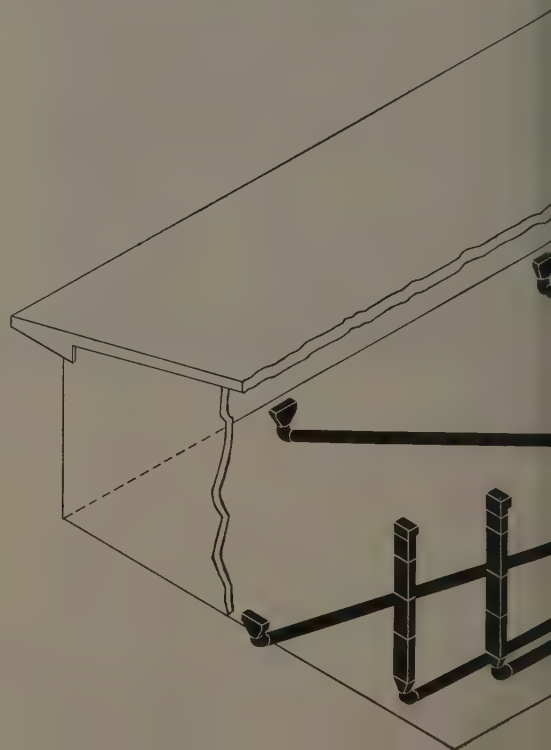
3. Moisture from humid outside air will be kept from infiltrating the house by the foil vapor seal on the insulation. Effect of the major source of indoor moisture, the clothes drier, is neutralized by a special built-in vent running up from the drier and out the roof. If a crawl space is used, the earth is covered by heavy 55-lb. roll roofing which serves as a lid over ground moisture.

4. Walls are lined with 2" foil-backed insulation ($U=.09$).

5. Heat created indoors, largely by the range, is blown out from its source by a kitchen exhaust fan right overhead.

By whittling away at each of these major heat sources American cut the overall heat gain to 20,000 Btu's an hour, based on 75° inside, 95° outside. A 2-hp air-cooled unit (21,800 Btu capacity) can be used instead of the more expensive 3 hp, normally needed in a house this size. Money spent on bolstering the house for cooling is clearly paid back by the savings on the smaller unit. Total builder cost for the cooling system is about \$1,000 over the cost of heating alone.

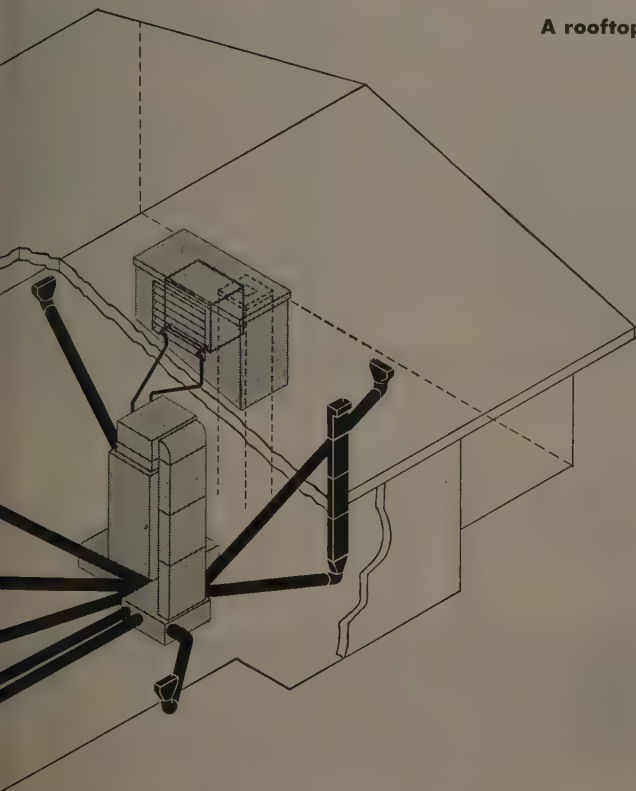
Average operating cost in the North is estimated accurately at \$36 a summer, \$9 monthly during a four-month season, all for electricity as no water is used. This is based on the new method engineers have worked out for figuring costs (p. 126). Even in Houston cooling would average a reasonable \$49 a summer.





A rooftop water saver is camouflaged inside the dual-purpose chimney

On top of this house is Architect Nelson's deceptively neat answer to one of the thorniest problems in home cooling: where do you put the air-cooled condenser or cooling tower, neither of which is very good looking to start with?



In this case an auxiliary air-cooled condenser is used and Nelson spotted it on the roof *inside* the chimney. Thus the problem of unsightliness is attractively licked.

It works this way. The main year-round unit is in a central utility room. Heat-laden refrigerant from the compressor is piped to the roof and passes through metal tubes of the condenser. A $\frac{1}{4}$ -hp condenser fan draws in outside air to cool the tubes and the air is blown out through louvers in the other side of the chimney housing. The cooled Freon is then piped back to the main unit. In effect, the same method of heat disposal is used as in window units.

This kind of installation is cheap because of short pipe runs from the main unit to the roof overhead. Noise is no longer a nuisance because the attic serves as a buffer between the condenser and the people in the house. And although air-cooled condensers may be less efficient than cooling towers, in small houses like this that are properly designed for cooling the difference is too small to matter.



1. Adhesive is buttered onto anchor plate (below) which has protruding nail in center.

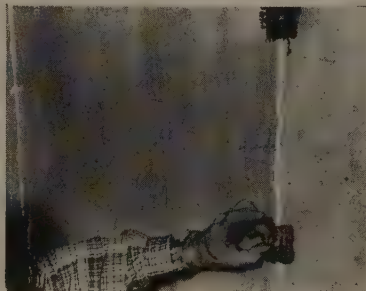


3. Furring strips are hammered onto nails (below) without damaging masonry wall.



Two photos top of page, courtesy of US Plywood; others, Miracle Adhesive, Inc.

2. Anchors are fastened to wall (below), usually 12" o.c., and left to dry overnight.



Other new products

A roofing system that permits shingles on low-pitched roofs p. 176.

An imported plastic door knob that automatically locks and unlocks itself p. 182

A furnace that uses the chimney as a heat chamber p. 194

An adjustable lally column that eliminates shimming p. 194

Between-the-studs venting for wall furnaces p. 200



Adhesive is brushed on panel back to fit stud spacing, then let dry until it is no longer tacky. Studs get same treatment as panel.

Instant grab of adhesive eliminates need for bracing. Hammering on wooden block along stud length insures constant contact with plywood.

Adhesives vs. nails

Builders find new uses for new adhesives

Face nailing has always restricted the use of quality plywood paneling, because dents require staining and puttying. Now prefinished panels can be installed without damage in a single operation. The secret is a new contact cement being marketed that instantly bonds 4' x 8' panels to studs or furring strips which require no support while the bond is developing full strength. There are three steps to installation:

- 1.** Brush cement onto studs and panels.
- 2.** Let cement dry (20 to 30 minutes).
- 3.** Press panel into place.

No clamping is needed—the adhesive cures chemically. Originally developed for the bonding of plastic laminates to countertops, the resins-and-neoprene-rubber compound provides a permanent bond for all porous materials (except fiberboards which are subject to delamination). One gallon costs \$7 and covers 80 to 100 sq. ft.

New adhesives, new uses

Builders are solving many fastening problems with adhesives. The thin bed setting method for tile is an old story (AF, Nov. '50) as well as the use of adhesives for insulation and acoustical tile. But Builder Andy Place, in South Bend, is now putting up dry wall with both nails and adhesives. When the adhesive has set, Place drives the nails through the dry

continued on p. 170

builder-partners* with Insulite!



1

Shadowbrook Homes Saved \$150 per home with the Bildrite (left) and Shingle-Backer (below) combination. With Bildrite, one man can sheath 1,000 sq. ft. in 8 hours or less. Cuts application time as much as 43%. 4' Bildrite eliminates the need for corner-bracing and building paper. Since Bildrite is waterproofed throughout with asphalt, it can be stored outdoors, left exposed to the weather indefinitely.

2

Shingle-Backer Cuts Application Time in Half. Four-foot panels produce deep, modern shadow line. Practically eliminate waste. Can be used or stored anywhere in any weather because Shingle-Backer is waterproofed throughout with asphalt. Approved for application directly over Bildrite sheathing.



3

Primed Graylite for Soffits and Porch Ceilings Saved \$25 per job on the Shadowbrook Homes project. Made of the same material as tough, weather-resistant Bildrite, Primed Graylite is primed at the factory for easy painting. Ends delamination problem. Available in 1/2" and 3/4" thicknesses, 4-foot widths, 6 to 12-foot lengths.

INSULITE, BILDRITE AND GRAYLITE ARE REGISTERED TRADE MARKS

21 quality homes like this in the \$20,000 to \$30,000 range make up the Shadowbrook Homes project. The split-level homes feature walkout basements, cathedral type center hall. Architect: John Wade, Forest Hills, N. Y.

Build and insulate with double-duty

INSULITE



Made of hardy Northern wood

See how you can build more house for less money! Write today for Insulite's new package of well-illustrated and documented case histories, technical information, product and application data prepared by Insulite engineers. Drop a card or letter to Insulite, Minneapolis 2, Minnesota.



INSULITE DIVISION
Minnesota and Ontario Paper Company
Minneapolis 2, Minnesota

HOW TO CREATE ROOMS THAT SELL HOMES FASTER



On new building
or remodeling,
build in
the carefree
features of

NEVAMAR®
THE PRE-FINISHED SURFACING MATERIAL

Home buyers are learning more and more about the carefree living they can enjoy with NEVAMAR surfaces. National magazines have been featuring NEVAMAR installations in stories and pictures, pointing out the beauty, durability and freedom from care that they offer.

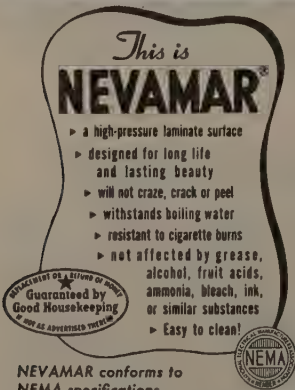
You'll appreciate the innumerable advantages of working with NEVAMAR. It can be installed right on the job. Its many colors and patterns, including authentic wood-grains, lend themselves to any interior—kitchens, bathrooms, rumpus rooms, clubrooms—to name just a few.

NEVAMAR has an amazing resistance to wear and never needs painting or refinishing. It definitely increases the value of any home you build or remodel.

GET ALL THE FACTS NOW . . .

You can have all the information you need about NEVAMAR, plus a complete set of samples. Write today.

In New York: See the NEVAMAR exhibit
at Architects' Samples, 101 Park Ave.,
New York City.



NEVAMAR conforms to
NEMA specifications

DISTRIBUTOR: THE NEVAMAR COMPANY, ODENTON, MARYLAND

The NATIONAL Plastic Products Company

Manufacturers of Nevamar High-Pressure Laminates • SARAN FILAMENTS • Wynene Molded Products

ODENTON, MARYLAND • NEW YORK: EMPIRE STATE BUILDING • LOS ANGELES: 5025 HAMPTON STREET

In Canada: Richmond Plastics, Limited • Richmond, P.Q.

REVIEWS

WOODWORKING FOR THE HOME CRAFTSMAN.
By Emanuele Stieri. Barnes & Noble, Inc., 105
Fifth Ave., New York 3, N.Y. 376 pp. \$1.50

Builders who complain about the shortage of "old-time" mechanics—those legendary handymen who could do all jobs well—might consider the idea of "growing their own." This complete handbook of hand and power tools, of solutions to common building and repair problems, is basic enough to teach the rawest hammer-and-saw recruit, yet professional enough to be useful to even a skilled mechanic. Presented to a new workman along with his time card, it might easily return its nominal cost by cutting short his learning period on the job.

Because it is a simple guide to all tools, their uses and their care, this handbook would also be an excellent present from the builder to the home buyer, both as a good-will builder, and as a way of reducing expensive service calls to fix tiny flaws that the home owner might repair himself if he only knew what to do—and how to do it. Service calls are an important and continuing expense for the conscientious builder, and this paperback book in the hands of the home buyer might eliminate some of the less important among them. Few husbands can resist the chance to show off their ability to "fix things around the house" and every job done by the home buyer during the break-in period of a new house is real money in the pocket of the builder.

The book is illustrated with hundreds of clear and explanatory drawings and photographs and is well-indexed. "How-to" books rarely have interest for the professional because of their amateur approach, but this volume is equally valuable to teach the most unknowing apartment dweller and to develop the skills of the young professional.

FINANCING THE CONSTRUCTION OF PREFABRICATED HOUSES. HHFA Housing Research
Paper No. 27. US Government Printing Office,
Washington 25, D.C. 40¢

Though prefab manufacturers have developed inclusive plans for financing actual construction costs of their dealers (including payment for the housing package), little attention has been given to a more fundamental barrier—acquisition and development of land. This HHFA booklet explains the financing plans of many of the leading prefabbers and is forced to conclude that "no manufacturer studied has any plan for advancing funds to its dealers for this purpose."

All preconstruction credit facilities are explored, and found wanting, and the book concludes that if prefabricated houses are to reach their full potential, a vehicle of land financing will have to be developed by the industry.



"A salute to those who made it possible" *



Woodbrook Homes (90 houses), Baltimore. Architect: Lawrence A. Menefee.

"Fenestra Ready-Trimmed Casements cut our installation time and costs greatly!"...

—says Builder C. Albert Merritt, President of Woodbrook Homes, Inc., Baltimore, Maryland

"We recently finished installing your Fenestra Casements with the combination inside-outside casings in our new group house development," continues Mr. Merritt, in his letter.

"For many years we had been using wood double-hung windows. We would be far amiss were we not to let you know of how greatly satisfied we are with your casements' combination casing and its economical uses.

"It cut our installation and costs greatly by eliminating stools, aprons, etc. The economy and timesaving which we effected went far beyond our initial planning.

"If ever you would like to refer any undecided builders

to us for field findings on Fenestra Casements with trim, please feel free to do so."

We'd like to add one thing... the modern streamlined beauty of Fenestra* Steel Windows adds a whale of a lot of sales appeal to your houses. For full information on Fenestra Ready-Trimmed Casements, Window Walls, Residential Projected (Awning Type) Windows, Residential Type Doors, Sliding Closet Doors and other Fenestra Building Products (and Fenestra Super Hot-Dip Galvanizing), see your dealer, call your local Fenestra Representative, or write to Detroit Steel Products Co., Dept. HH-4, 3401 Griffin Street, Detroit 11, Michigan. *®

* Your need for fine, maintenance-free doors... and beautiful, modern windows—complete with trim, screens and storm sash—encouraged us to develop these members of the Fenestra Building Product family.

Fenestra

**RESIDENTIAL
STEEL WINDOWS
AND DOORS**

WINDOWS • HARDWARE • CASINGS • SCREENS • STORM SASH

Richly right for the "Ranger"

... that's the beauty of *Higgins Block* INC.



These two views of the National Homes 1954 "Ranger" show how Higgins Block can be used to add the extra sales appeal of a rich, lustrous, quality appearance. Look at all the other selling features, too:

- 9" x 9" net face hardwood blocks—easy to install
- 3-ply cross-grain construction—when properly installed will not warp, buckle, cup or crack
- Selected oak face—comes with final finish
- Pressure bonded with marine-type glue—water-repellent, climate-proof
- Deep-impregnated with famous "Penta"—rot-proof, termite-proof
- Grooved back anchors into adhesive—quiet and comfortable
- Can be laid without special preparation directly on concrete slab—ideal for radiant heat
- Blocks fit flush—without large, visible V-grooves

Higgins BONDED HARDWOOD BLOCK FLOORING
INC. THE WORLD-FAMOUS BOAT BUILDERS



Use this coupon for free sample block and literature

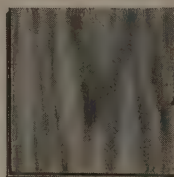
Higgins, Inc., Dept. H-44, New Orleans, La.

Gentlemen: Please send sample block and literature to

Firm Name.....

Address.....

City..... Zone..... State.....



NEW PRODUCTS *continued*

Continued from p. 158



Laminated plastic counters are now easy

wall into the studs, then fills the holes. He claims to have eliminated all nail popping.

Place also bonds oak thresholds and interior sills with a reclaimed rubber adhesive. Formerly, these were often split by case-hardened nails. Cost to Place for adhesive and labor for all three operations: \$40 per house. Split sills or thresholds: none.

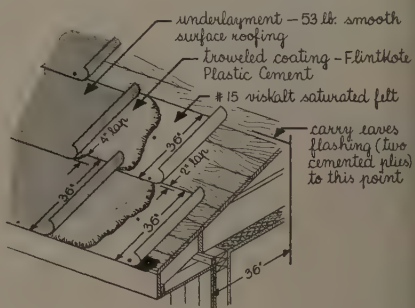


Gun applies adhesive for dry wall

Solid masonry construction has always posed problems to finishing interior walls; nails used to put up furring strips often damage the wall and permit water to enter. New nailing anchors are fastened to masonry walls with adhesive. These consist of a 2" x 2" perforated metal plate, with a nail (or bolt, spindle or threaded stud) welded to the center. Anchors are embedded in a blob of adhesive, furring strips then impaled on the nails.

SHINGLING SYSTEM for low-pitched roofs and a color coating for built-up roofs

Even builders who follow the contemporary trend to the low-pitched roof now can have a shingled roof if they use Flintkote's newly



continued on p. 176

**JUST ADD
WATER...
AND MIX!**



**Better plaster jobs
every time with "one package" GYP SOLITE**

GOLD Bond Gypsolite gives you finer interior plastering results because *it takes the guesswork out of mixing*. Just add water—nothing else. You get uniform, high quality basecoats with moderate suction for better finish coats, every time.

The secret is in the processing! "One Package" Gypsolite is an accurately measured mixture of Gold Bond Gypsum Plaster and quality graded Perlite. Eliminates sand hauling . . . speeds up the job.

Lightweight Gypsolite cuts total plaster weight by more than 50% . . . reduces dead load on structure and framing members. Gives your houses added benefits in extra insulation and fire resistance.

Ask your plastering contractor to use Gold Bond Gypsolite on your next job. He'll find it not only saves mixing time, but is easier to work . . . and costs no more than job-mixed lightweight aggregates.

Remember, everything goes right with Gypsolite!

Get the undivided
responsibility
of National Gypsum

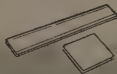
use **Gold Bond**
inside and out



Gypsum
Board
Products



Plaster
and
Lime



Insulation
Plank
and Tile



Rock
Wool



Paint
Products



Acoustical
Tile



Asbestos-
Cement
Products

NATIONAL GYPSUM COMPANY • BUFFALO 2, NEW YORK

SOSS HINGES ADD BEAUTY AND DISTINCTION TO EVERY HOME



Louvered doors, equipped with invisible SOSS HINGES, as used in the home of C. J. Soss, Beverly Hills, Calif.

ARCHITECT AND BUILDER:
Ivan Wells & Sons, Beverly Hills, Calif.

Unique, invisible SOSS HINGES are completely hidden from view when doors or lids are closed. This feature eliminates ugly protruding hinge butts. SOSS HINGES make possible the flush, clean, smooth surfaces so necessary for smart, contemporary architecture. Use them whenever you build or remodel.

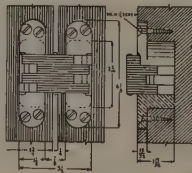
SOSS
INVISIBLE
HINGES

Sizes Available For
Every Type of Installation

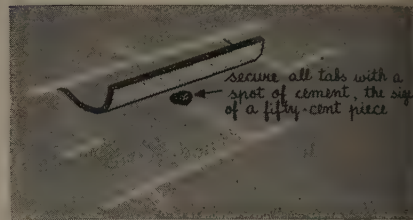
FREE BOOKLET



Gives complete details on America's only modern hinge. Write for it today—the hinge that hides itself.



SOSS Manufacturing Company
21717 HOOVER ROAD
DETROIT 13, MICHIGAN

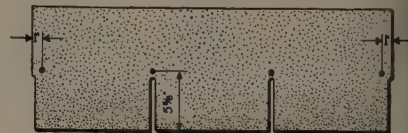


Adhesive prevents wind damage developed *Skytab* system. This permits the use of shingles on slopes as low as 2' in 12'. Previously, asphalt strip shingles could not be used on pitches below 4' in 12' because of the danger of wind and rain penetration.

Key to the Flintkote system is a thorough preparation of the underlayment, cementing the felt or roll roofing to a point 36" back from the wall, and the use of an asphalt adhesive to secure each shingle tab. The "de luxe" *Skytab* uses 55-lb. roll roofing as a base with 275-lb. shingles, and is FHA approved for low pitches. A "standard" *Skytex* version utilizes 15-lb. roofing felt and 210-lb. shingles and has been submitted for FHA approval. Parallel research by the Asphalt Roofing Industry Bureau has resulted in a recommendation by that body that 210-lb. shingles are now practical for low-pitched roofs, if industry specifications for underlayment are followed.

Costs will vary with the locality, but the manufacturer claims that the installation will be competitive with a comparable built-up roof, usually prescribed for shallow slopes.

For new or existing built-up roofs, Flintkote offers an emulsion-type coating called *Skykote*



Spacing of nails is important

that can be sprayed or brushed on gravel surfacing in four colors (green, gray, buff and coral) as well as white. *Skykote* is a decorative finish only, and is not intended to revive or repair a worn-out roof. Application is at the rate of 1½ to 2 gal. per 100 sq. ft., and the roof should be free from dust and loose particles. Price: \$5 per gal.

Manufacturer: Flintkote Co., 30 Rockefeller Plaza, New York 20, N. Y.

Lowest pitched roofs can be shingled



continued on p. 182

Demonstration that sells houses faster!

Showing these features of Trane Baseboard Heating

Freedom, explain the
see's proof
standout value!

Glance at these pictures and see how easy it is to delight the wife, make sense to the husband, close sales faster — by dramatizing TRANE Baseboard Heating. Both will appreciate how this system promises genuine heating comfort by heating where cold begins—along *outer walls*, *under windows*. Mrs. Prospect can see at a glance that TRANE Baseboard allows her *complete decorating freedom*.

Use this demonstration to convince toughest prospects you've built *standout value* into your house — prove you're offering more for the money!

Whether you're building one house or hundreds of them, TRANE Baseboard Heating—demonstrated this way—will help you speed up their sale.

See your nearest TRANE Sales Office or write TRANE, La Crosse, Wis.



Show the freedom of furniture arrangement this TRANE system permits. They'll like being able to place furniture anywhere, even against Baseboard Convectors, without harm from excessive heat or sharp edges . . . enjoy being able to use any part of the draperies.



3. Assure them THIS system heats where cold begins — *under windows*, along *outer walls*. Point out that instead of getting spotty heat that's concentrated at just a few points, the entire living area is

surrounded—literally *surrounded*—by an even blanket of gentle warmth. There are never any more cold drafts around floors where children play. *Drafts are stopped before they start!*

Let them see the safety! TRANE Baseboard Convectors are never hot for a baby's touch; no dangerous sharp edges! From comfort, safety, savings to safety, you're speaking the prospects' language!

Where wall area is limited, as in bathrooms, your best answer is often the TRANE Type A Convectors. Ties in with same system as baseboard. Install free-standing or recessed.



Sell houses faster with the help of

TRANE

Baseboard Convectors

MANUFACTURING ENGINEERS OF AIR CONDITIONING, HEATING, VENTILATING AND HEAT TRANSFER EQUIPMENT

The Trane Company, La Crosse, Wis. • East Mfg. Div., Scranton, Penn.
Trane Co. of Canada, Ltd., Toronto • 90 U.S. and 14 Canadian Offices.





Gas or electric range.
Electric refrigerator.
Counter, range-top
and sink in one
seamless piece.
Cupboard and under-
sink storage. All in
units 39" to 69" wide.

**VITREOUS
PORCELAIN FRONTS
AND
WORK TOPS**

DWYER KITCHENS

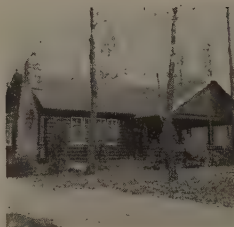
For New Apartments

Typical are the Essex Apartments in Indianapolis where 390 Dwyer Kitchens save room for more spacious living areas. Dwyer Kitchens enjoy 26-year record for durability and trouble-free operation in rental properties.



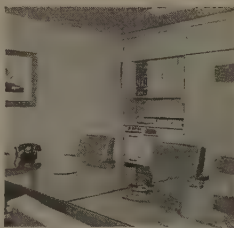
For Vacation Properties

Motels and resort cabins encourage longer stays and better rents with Dwyer Kitchens. Mother gets more vacation too... enjoys full kitchen convenience with minimum work.



For Business and Special Uses

Convenient for coffee, for simple or sumptuous food. Thousands used in offices, stores, banks, television and radio stations, fire stations, schools, churches... used for night shifts... and wherever close-at-hand kitchen facilities are needed.

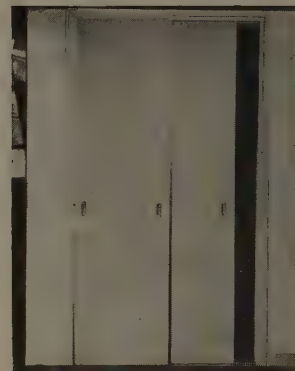


For Remodeling

Change old residences from tax-eaters to profit-makers. Dwyer Kitchens are the key to remodeling into quickly rented apartments.



NEW PRODUCTS *continued*



KING-SIZE SLIDING CLOSET DOOR permits storage right to ceiling

Easily accessible storage, from floor to ceiling, is provided by Amweld's new 8'-high steel sliding door that can be assembled and installed with just one tool—a screw driver. Construction of closet openings is simplified by the elimination of the partial wall necessary above conventional-size doors.

The door is shipped knocked down, and is prime coated with a neutral color baked on enamel, ready for the final coat. Rollers and spring-tension guide are nylon, and door pulls are plastic. List price: 4' wide, \$38.67; 5', \$40.04; 6', \$45.48.

Manufacturer: American Welding & Mfg. Co., Warren, Ohio.

KEYLESS LOCK insures privacy in bathroom or darkroom, opens only from inside

A new combination door latch and keyless lock eliminates any accidental intrusion into occupied bathrooms, laboratories, or photo darkrooms by automatically locking when the door knob is turned from the inside. A turn of the knob opens the lock. The lock does not engage when closed from the outside.

Secret of the mystifying action of this handsome import from Denmark is its double-pronged latch, controlled by the plastic



knobs, and the special striker plate mounted in the door jamb. The door cannot be closed without turning the knob. In an emergency, the lock can be opened by removing two screws. Knobs come in white or black plastic. Approximate retail price: \$4.
Importer: Dahlgren Co., 120 W. 48th St., New York 20, N. Y.

continued on p. 184

SEND FOR FREE BULLETINS ON DWYER KITCHENS

Name _____

Address _____

Town _____ State _____

DWYER PRODUCTS CORPORATION, DEPT. D44, Michigan City, Ind.

MAIL COUPON OR WRITE FOR
COMPLETE BULLETINS

**DWYER PRODUCTS
CORPORATION**

**Dept. D44
Michigan City, Indiana**

KNOW COOLING TOWERS!

New FREE Marley booklet gives you
the answers on packaged water cooling towers

Because selection and installation of the proper cooling tower can make or break an air conditioning job, numerous builders and architects have sought reliable information from the Marley Company, world's leading producer of water cooling towers. Now, in "PACKAGED COOLING TOWER KNOW-HOW," Marley shares its thirty years of specialized experience with all those who have a stake in the booming air conditioning market.

This new 32-page book is so basic and fundamental that it is a must for newcomers to air conditioning, yet is so complete that it is of great value to experienced installers. It explains the functioning of cooling towers . . . describes types of towers . . . aids in selecting the proper tower for the job . . . gives

advice on tower location, piping, electrical wiring . . . complete installation and maintenance instructions that facilitate erection and operation of cooling towers.

Copies are yours for the asking for a limited time.
Mail the coupon today.

The Marley Company
Kansas City, Mo.



THE MARLEY COMPANY

212 W. Gregory Kansas City, Mo.
Please send me a copy of your new free book
"Packaged Cooling Tower Know-How."

NAME _____
FIRM _____
ADDRESS _____
CITY _____ STATE _____

Since

HOPE'S

1818

STEEL WINDOWS HAVE THE STRENGTH AND RIGIDITY THAT NO OTHER WINDOW CAN MATCH



Residence of Mr. and Mrs. Harry E. Ormston,
McLean, Virginia

Designed and Built by
Architect Harry E. Ormston

Award Winner

HOPE'S STEEL CASEMENTS were installed in the window-wall areas of Architect Ormston's award-winning home. Ideally suited to the architecture of the building, they will permit easily-controlled ventilation; never warp or bind. Endowed with the strength and rigidity found only in steel, they will provide a lifetime of trouble-free service and require little maintenance.

Write for Catalog 102.

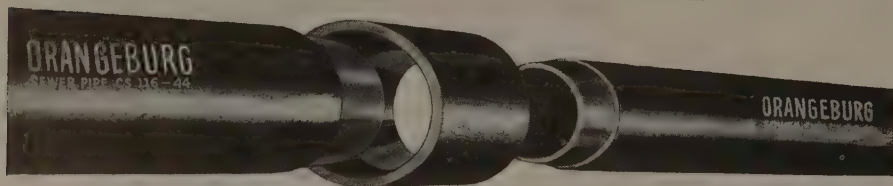
HOPE'S WINDOWS, INC., Jamestown, N. Y.

THE FINEST BUILDINGS THROUGHOUT THE WORLD ARE FITTED WITH HOPE'S WINDOWS



ORANGEBURG®

THE ROOT-PROOF PIPE



MORE AND MORE BUILDERS AND HOME BUYERS DEMAND ITS MANY, MONEY SAVING ADVANTAGES

When you specify or install Orangeburg Root-Proof Pipe and Fittings, your client gets a pipeline sure to deliver uninterrupted service.

Here are the reasons why the Orangeburg name is the mark of quality—quality you can always depend on.

ORANGEBURG PIPE AND FITTINGS—with self sealing Taperweld® Joints—keep roots from entering anywhere along the entire pipeline. Strong, tough, resilient Orangeburg resists corrosive ground waters, traffic tremors, earth deflections, temperature variations. Light weight 8-foot lengths and fewer joints speed assembly and cut costs of handling and laying.

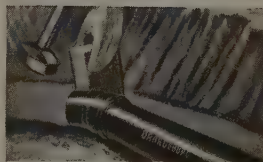
ORANGEBURG ROOT-PROOF PIPE is for . . . house-to-sewer (or septic tank) connections, lines from downspouts and storm drains, other non-pressure underground uses.

Orangeburg Perforated Pipe is widely used for . . . septic tank disposal fields, foundation footing drains—also the draining of wet spots in lawns, drive-in theaters, athletic fields, parking lots, airports.

IT PAYS TO SPECIFY AND INSTALL
THE LEADER—ORANGEBURG PIPE AND FITTINGS

Informative catalog 306 on request. Write Dept. H

ORANGEBURG MANUFACTURING CO., INC., ORANGEBURG, NEW YORK
West Coast Plant: Newark, California



1/4 Bend connected to Orangeburg Pipe making a 45° turn. The famous Orangeburg Taperweld Joints are leak-proof and root-proof.



1/4 Bend connected to this down-spout forms a 90° turn. Orangeburg Fittings are quickly and easily connected—save installation costs.



Wye Fitting showing a branch connection. Orangeburg Fittings have the same high quality as Orangeburg Pipe.

NEW PRODUCTS *continued*



ADJUSTABLE VENTILATION for crawl spaces; modular with brick or block foundations

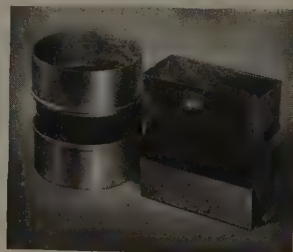
Ventilating breezes (but not insects or rodents) are admitted by the new *M-D Foundation Vent Grille*, which incorporates a wire mesh welded to the back of the aluminum vent, and an adjustable shutter for controlling air on damp or especially cold days. The grille is available without screen or shutter if desired, and can be used as a corner ventilator.

The unit is 8" high by 16" wide, the size of a standard concrete block, and modular for brickwork. Complete ventilator retails at \$2.65, including screen and shutter.

Manufacturer: Macklanburg-Duncan Co., Box 1197, Oklahoma City, Okla.

PREFABRICATED DUCT CONNECTIONS abolish vibration noise, cut on-site labor

Powerful air-conditioning compressors or forced-air furnace fans can make vibrations an annoying background in the home if the noise is not "shortstopped" by flexible connections in the ductwork. In addition, joining canvas or asbestos to metal connecting strips is tedious, time-consuming work.



Connections may be round or square

Now factory-assembled connections are available in 100' coils, packed in a carton that serves as a dispenser. *Silent-Duct* made of 24-ga. galvanized steel fastened with fire-, moisture- and mildew-resistant canvas (also available: asbestos or plastic sheeting). The mechanic simply pulls out and cuts off the required length of material and fabricates the size and shape needed. Price: \$35 per 100' coil (in canvas), F.O.B. Long Island City, compared with a normal on-the-job fabrication cost of from \$65 to \$80 per 100'.

Manufacturer: Elgen Mfg. Corp., 41-34 39th St., Long Island City 4, N. Y.

continued on p. 18



*Houses Sell
Easier with*



PERMANENT CAST IRON SEWER AND WASTE LINES

Home buyers are becoming more particular. They now are looking for such hidden values as the unseen pipe lines used for waste and sewage from a plumbing system. The magic word here is "Cast Iron Soil Pipe," because more and more people know that cast iron remains in perfect working order as long as the structure stands.

For the contractor, cast iron soil pipe for house sewers is easy to use. No tricky trenching required. Lay in loam, sand, gravel or any kind of soil, 1 foot deep or ten. No need to "sculpture" a trench to fit the pipe. Cast Iron Soil Pipe is mechanically strong, joints tight, walls non-absorbent. No clogging and damage by tree roots seeking moisture. Cast Iron is the only pipe approved by ALL building codes.



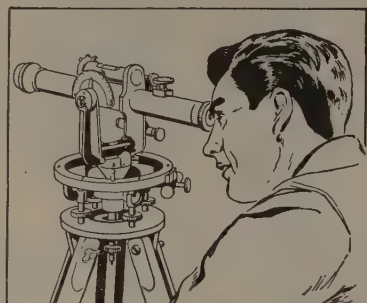
*Woodward Iron Company does not manufacture pipe, but supply
leading Cast Iron Pipe foundries with high grade foundry pig iron from
which pipe is made.*

WOODWARD IRON COMPANY

WOODWARD, ALABAMA

Precision-built for the man behind the gun

Light construction levels ...by White



NEVER BEFORE

...such accuracy
and dependability
at so low a cost

DEVELOPED originally for agricultural use, these levels have been recently improved and are now in big demand for a wide variety of light construction operations.

Small, compact and sturdy, these White levels are exceptionally simple in design and construction. And it's this rugged simplicity that makes them extra reliable and trouble-free.

Model 8020 features 10-power telescope, 2½" long graduated spirit level and 4½" diameter circle graduated in degrees and numbered in quadrants (0-90-0), with an index pointer.

Price: \$38.00* complete

Model 8022 convertible — allows you to level and plumb from same setup. Features 10-power telescope, 2½" graduated spirit level, 2¼" graduated vertical arc and a 4½" diameter horizontal circle. Price: \$74.00* complete

For complete details, write for **DAVID WHITE Bulletin 1053** and name of nearest dealer, 314 W. Court St., Milwaukee 12, Wis.



We offer expert
REPAIR SERVICE
on all makes,
all types of
instruments

*Prices subject to change without notice.

NEW PRODUCTS *continued*



PREFABRICATED CORNERS cut installation time on cedar-shake walls

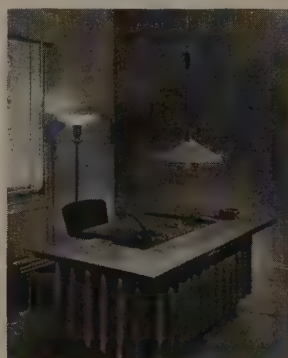
Caulking guns and metal corners are unnecessary to finish wood-shingled walls if new factory-made cedar corners are used. Made from regular grooved cedar stock, the corners are designed to overlay and finish a roughly fitted corner after side walls are completed.

Redy-Korners are 14¼" long, and fit beneath each undercourse. They are packed 20 per bundle, five bundles per carton. Prices: natural, 12¢ ea.; primed, 14¢ ea.; two-coated in standard shingle colors, 16¢ ea. (Corners for an average house: \$8 to \$9.)

Manufacturer: Capilano Timber Co., Ltd., Box 608, Vancouver, B. C., Canada.

BLOND HARDBOARDS are striated or corrugated for unique paneling effects

New construction, as well as remodeling, will call for many ways to use two new hardboard products that bring a distinctive appearance to this durable material. **Rib-tex** has the look of a combed material, though the parallel grooves are molded into the surface. The raised ridges will not chip or splinter away. **Corru-tex** is claimed to be the first wood product produced with corrugations, and is recommended for partitions and half walls, screens and space dividers.



As both are wood products, they can be nailed, sawed, beveled, drilled, etc. like any other wood. No sanding is necessary, and any paint or stain finish can be applied, or the natural blond color left as is. **Rib-tex** comes in standard 4' x 8' sheets, retails for \$6 (add 50¢ for tempered board); **Corru-tex** is 45" x 96", retails for \$5 per sheet.

Manufacturer: Chapman Co., Corvallis, Ore.

continued on p. 194

How To Avoid Rehanging Doors



ONE coat of Cuprinol does it. Stops excessive warping and swelling. Saves all the time and money required by call-backs — and keeps customers pleased with your work.

How To Make PLYWOOD Look its Best



ONE coat of Cuprinol does it. Excellent as a primer and sealer — stops grain raise and checking. Eliminates time consuming sanding between coats of paint. Costs no more than other sealers. Also ideal for your own plywood forms!

How To add 3

Selling Features
at Minimum Cost



ONE coat of triple-acting Cuprinol does it. 1. Wood lasts longer — no rot or termites. 2. Wood looks better — no grain raise or checking. 3. Wood performs better — no warping or swelling.

SAFE TO HANDLE!

Cuprinol is NON-toxic. Will not irritate your employees' skin. Hot weather will not hold up your treating operations, and no protective clothing is required. Available in all standard size containers including concentrate. Write today for the full story.

The answer is
CUPRINOL
The Oldest Branded Wood Preservative

DIVISION OF
DARWORTH, Inc.
SIMSBURY 6, CONN.

**"Used 16,000
Columbia-matic Screens
... saved considerable
on installation costs,"**

says President of San Diego
Building Contractors' Assn.,
Clifford O. Boren,
Clifford O. Boren Contracting Co., Inc.



Aerial view of Mr. Boren's Redwood and Hubner developments. Mr. Boren reports he has found Columbia-matics completely satisfactory.

"Not only do our customers like them, but they save us considerable on installation costs."

Columbia-matic TENSION SCREENS

give homes more value at less cost

LEADING BUILDERS EVERYWHERE are discovering how to give their houses more value, more sales appeal—and lower their screening costs at the same time. Like Mr. Boren in his Redwood and Hubner developments, they select Columbia-matic Tension Screens.

Columbia-matics are the preferred frameless screens which offer *automatic tension*, assuring full insect protection. Full-length, all-aluminum, they are neat, durable . . . the perfect modern screening for double-hung windows.

Here's why superior Columbia-matics actually save you money over ordinary screens

- **Easily installed** by unskilled labor—only 7 screws, no template.
- **No fitting**—Columbia-matics are pre-cut to specifications.
- **No painting**—Columbia-matics are all-aluminum.
- **No callbacks**—Columbia-matics can't swell, stick, warp . . . won't drip-stain house siding.

You'll want to start giving your homes the economy and sales-plus of Columbia-matic Tension Screens. Send coupon for complete details today!



Here's why your prospects want Columbia-matics

Patented Automatic Tension—spring-loaded bottom rail holds full-length mesh tight against blind stops at all times.

Save time—Easy to put up and take down from inside. Anyone can do it in seconds.

Save work—No more struggling with clumsy rigid frames, ladders. Columbia-matics roll up for compact storage.

Save money—All rustproof aluminum. No painting, maintenance. No drip-stains on house.

Columbia Mills, Inc.
Dept. H-4, Syracuse 2, N. Y.

Please send me complete information on
Columbia-matic Tension Screens.

Name _____

Company Name _____

Street _____

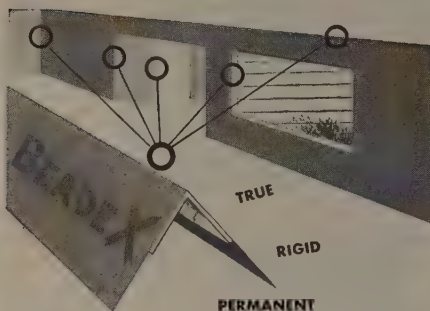
City _____ Zone _____ State _____

Check one:
☐ Architect ☐ Builder ☐ Other _____
(Specify)

IN DRYWALL

**TAPE is a necessity...
METAL an improvement**

Tape+Metal=
BEADEX
positive, permanent
corner protection



BEADEX has been developed specifically to supply positive reinforcement to dry-wall corners. The scientific combination of tape firmly laminated to metal has been proven to be the most satisfactory for finest protection, long life and to guarantee against metal edge crack lines. Since it is not nailed, BEADEX maintains a floating angle unaffected by shrinkage of framing materials.

Why BEADEX Corners are Guaranteed Crack-Proof for Life of Wall

- 1 Best quality joint tape is pressure bonded to metal with finest rubber base glues.
- 2 Tape extends 11/16" beyond edge of metal. No exposed metal edges or breaks requiring extra taping.
- 3 Applied with regular joint cement. Makes corner integral part of wall.
- 4 Aligns perfectly regardless of crookedness and warp-age of framing lumber.
- 5 Withstands extreme abuse. Will stay intact for life of building.
- 6 Applied by taping mechanic, a specialist in drywall construction.

Genuine BEADEX has name printed on product

*Reg. U. S. Pat. Off.
U. S. Pat. 2,593,859
U. S. Pat. 2,649,890
Canada Pat. 487,518



BEADEX FULFILLS
F. H. A. MINIMUM
PROPERTY
REQUIREMENT

Available for Both Outside and Inside Corners

Beadex Sales, Inc., 4615 8th Ave. N.W., Seattle, Wash. (Beadex of Canada [Ltd.], Box 317, Kingston, Ontario)



"Let Me
Tell You
More About
BEADEX
Building
Aids"

Outside ☐ Inside ☐ JambeX ☐

Name.....

Address.....

City.....Zone.....State.....

HH4-34

NEW PRODUCTS *continued*

ADJUSTABLE LALLY COLUMN ends shimming under beams

Uneven foundations are taken in stride by adjustable steel columns that can be raised as much as 4" to give perfectly level support for a main beam. After leveling, the entire mechanism is embedded in the concrete slab, and the load transferred from the adjusting screw to the column base plate.



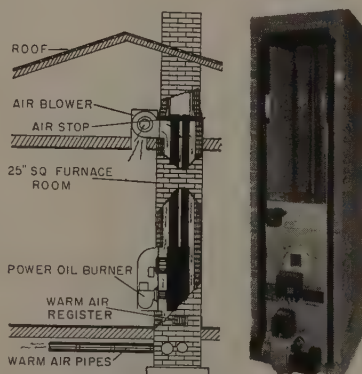
Columns come in 1" increments, and a 7-lb. length weighs 62 lb. Price: \$10.25 ea.

Manufacturer: L. L. LeJeune Co., 60th St. at Nicollet, Minneapolis, Minn.

LIFETIME FURNACE fits into chimney, takes no floor space

Safety and economy are by-products of Mor-temp's new *Feature Furnace*, which is designed to be encased in a normal 25" brick chimney. One-story houses especially will benefit from the up-to-36 sq. ft. of space saved, which can be added to the interior.

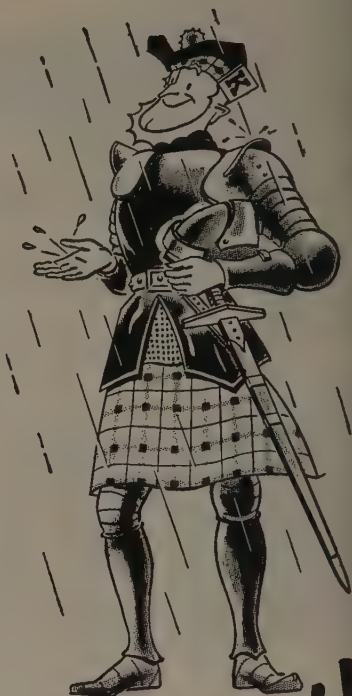
Long life is guaranteed by the use of stainless steel for the primary heat chamber, while the upper heat exchanger is glass-



coated *Vitroliner*. Previously classified as a critical material because of its use in jet engines, this stainless steel has an estimated lifetime of 60 years in furnace use.

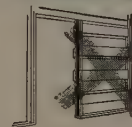
The furnace operates on the counterflow principle: a blower mounted in the attic forces air down over the radiation surface of the furnace, and distributes it at floor level (or through ducts in the slab or crawl

continued on p. 200



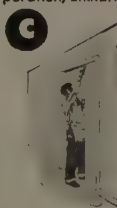
Warp-proof!

**ALL-STEEL
KENNAFRAME**
for sliding door pocket
installations



THE OLD WAY
Wood frames warp, causing sliding doors to stick or bind.

THE KENNAFRAME WAY



Kennaframe can't warp because it's all steel. Prefabricated, adjustable with track already installed in header for quick, trouble-free installations. Versatile Kennaframe takes all wall and trim applications. Select from two all-steel series. Write for free circular No. 89. Kennatrack Corporation, Elkhart, Indiana.

DOORWAY TO GREATER SALES OPPORTUNITIES

Give Your Homes a Brighter Look ...Add Eye-Appeal and Buy-Appeal with Structural Corrugated Glass

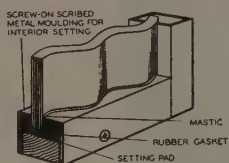
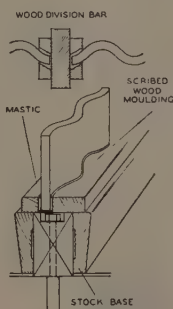
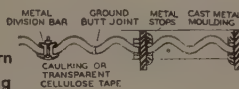
Translucent, light diffusing glass is in the modern mood. It can make your homes more interesting... more inviting... more buy-able. Mississippi's Structural Corrugated glass adds that something extra that turns suspects into prospects... sells on sight.

Home buyers love the effects that only Structural Corrugated glass can create... floods interiors with flattering "borrowed" light... makes rooms seem more spacious, friendlier.

And Structural Corrugated glass is easy to install. No plastered partitions. Eliminates wall painting. Always looks new. Give your homes the bright look that buyers look for. See your nearby Mississippi Glass distributor.

Send today for free Installation Specifications bulletin. Illustrated, detailed explanations for working with this modern material. Also ask for free booklet, "Modernize Your Home With Decorative Glass." Photographs of actual installations. Many ideas on ways to use this exciting new medium. Mail the handy coupon below.

Residence of Byron T. Sample, Assoc.,
Stainback & Scribner, Archts., Charlottesville,
Va. Gen. Contr., Edw. Van Loe, Inc.,
Charlottesville, Va.



MISSISSIPPI GLASS CO., 88 Angelica St., St. Louis 7, Mo.

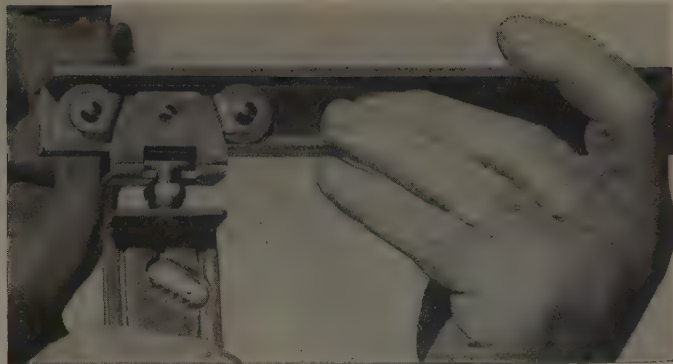
Please send free Installation Specifications bulletin and booklet,
"Modernize Your Home With Decorative Glass."

Name _____
Address _____
City _____ Zone _____ State _____

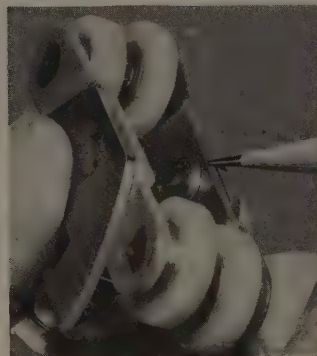
MISSISSIPPI *Glass* COMPANY

88 ANGELICA ST. SAINT LOUIS 7, MO.
NEW YORK • CHICAGO • FULLERTON, CALIF.

WORLD'S LARGEST MANUFACTURER OF ROLLED, FIGURED AND WIRED GLASS



New Product: Grant 7000 Sliding Door Hardware. Eight styles, each completely packaged. Manufacturer has incorporated every desirable feature, believes this the finest made.



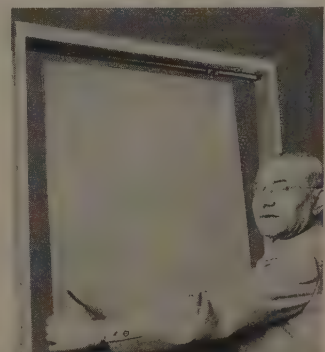
Floating action keeps nylon wheels (8 per door) in contact with track for smoothest, quietest action!



Easy installation! Carrier mounts on track; separate apron is attached to door. Notice this wedge.



It fits into v-groove in carrier; assures perfect positioning. Stopnut secures units together firmly.



Time and labor are saved with assembly line method of installation. Grant 7000 keeps costs down!

Grant Pulley & Hardware Corporation,
31-71 Whitestone Parkway,
Flushing, New York.

Gentlemen:
Please send me specifications on your new

Grant 7000

Sliding Door Hardware

Name

Company

Address

City

State



Enough play permits self-alignment in case of header or saddle misalignment. Works like a dream!

A Completely Packaged Low-Cost Fireplace and Chimney

- ▶ Burns wood or charcoal
- ▶ Everything needed—all in one low-cost unit (Mantel and facing material extra)
- ▶ Ample clearance to combustibles is built in
- ▶ Installs easily in new or existing homes
- ▶ No special construction necessary



Thulman FIREPLACE

You'll be amazed at the low cost of installing this fireplace and chimney unit in any home—small or large, old or new. This full 30" fireplace is far more economical than ordinary bricked-up types. It installs easily even on wood floors and needs *no clearance from combustibles* because the clearance is built in. Not just a fireplace form—not an auxiliary heater—the Majestic Thulman Fireplace is a completely self-contained, all-metal unit, easy to install, efficient in operation, durably built to last a housetime.

**ADD
TRIM OR MANTEL
OF ANY DESIGN**

**AROUND THESE
ECONOMICAL
METAL UNITS**



The space-saving size and design features of the Majestic Thulman Fireplace give the architect or builder full leeway in the planning of decorative treatment. Write today for complete details.

The Majestic Co., Inc.
416 Erie Street Huntington, Indiana

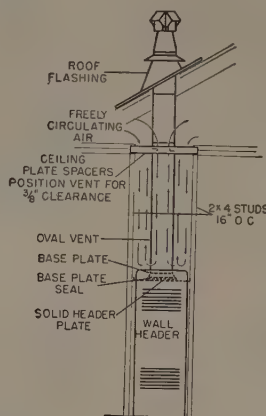
NEW PRODUCTS *continued*

space). Efficient operation is insured by the fact that all generated heat is sealed inside the masonry chimney, where it can escape into the house only through the ducts. Presently available for oil burners only. Average price, including installation, is \$550.

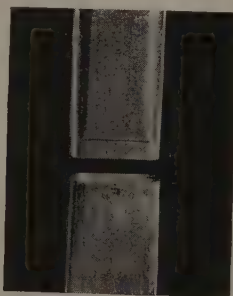
Manufacturer: Mortemp Products Corp., Box 386, Rockville, Md.

DOUBLE-WALLED VENT PIPE cuts fire and condensation danger in recessed gas wall heaters. Flue temperatures as high as 550°. just inches away from studs and walls, have been a big problem in recessed gas heaters. Aside from the ever present danger of fire, rapidly cooling gases can cause damage from condensation to both vent pipe and walls.

MV Metalbestos vents are oval, to fit the 4" space within studs. They have double walls,



the inner one of aluminum, for fast heating and resistance to corrosion, and an outer jacket of galvanized steel for protection. An insulating air space between the walls confines the heat to the inner pipe. A patented coupling



(above) makes joining pipe sections easy, and a full line of fittings is made.

Ceiling plate spacers position the vent for the 1/2" allowed clearance where the pipe passes through the top plate, and permit the free passage of air in the wall space around the vent. A solid header plate serves as a fire stop where the heater is joined to the vent.

Installed price on an average one-story house: \$20 to \$40, including fittings.
Manufacturer: Wm. Wallace Co., Belmont, Calif.

Technical Publications, p. 206



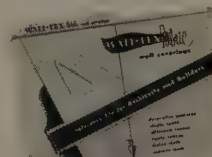
Showmanship that sells homes faster!

It's good showmanship (and good salesmanship) to dress up the walls of your new homes with Wall-Tex fabric wall coverings. The beautiful new patterns give a bright and colorful welcome to your prospects. The rich textured look of the fabric compels admiring attention . . . makes prospects want to see how their own furnishings would complete the setting.

Wall-Tex gives you high styling that highlights the finest features of your homes. And Wall-Tex is practical, too. It is completely washable. Its tough cloth backing resists scuffs and mars. It keeps its fresh, sparkling beauty years longer with far less care.

Pre-trimmed, easy to hang!

Pre-trimmed 24-inch Wall-Tex has straight, true edges, can be applied easier, faster, better—at a saving. Mail the coupon for sample swatches of beautiful new Wall-Tex patterns and File Folder of information to help you put more showmanship in selling today's tougher market.



WALL-TEX
fabric wall coverings

Columbus Coated Fabrics Corporation
Dept. HH-44, Columbus, Ohio

Guaranteed by
Good Housekeeping
NOT AS ADVERTISED THEREIN

Send your new File Folder on Wall-Tex and Sample Swatches.

Name _____

Street _____

City _____ State _____

Canadian Distributor: Empire Wall Papers, Ltd., Toronto

What Do Locks Actually Cost You?

Initial price of lock + Your cost of repairs or replacement = Your actual cost of a lock

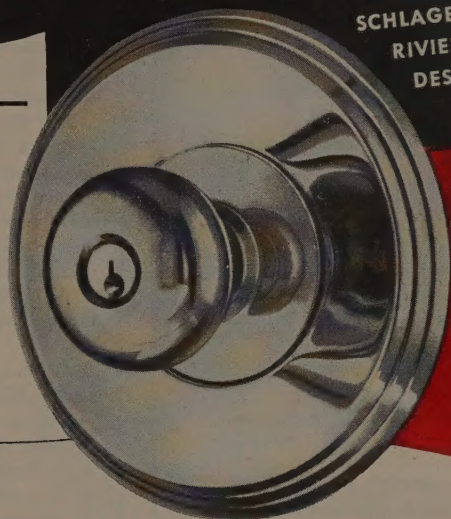
YOU CAN SAVE THIS COST WITH SCHLAGE LOCKS

Schlage Gives You These Extra Values, Too —

SALEABILITY

THROUGH DISTINCTIVE DESIGN

Schlage locks are an easy and inexpensive way of adding distinction to your homes. They are an extra sales feature. The beauty of Schlage's distinctive designs makes them important decorative assets that buyers appreciate.



SCHLAGE
RIVIERA
DESIGN

QUALITY

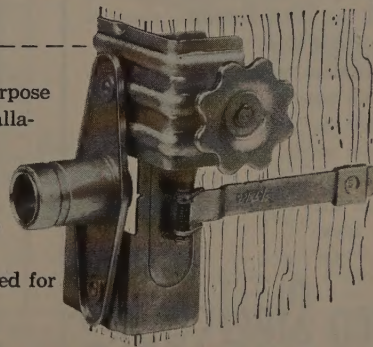
that the buyer can see



The first building product buyers touch when they enter your homes is a lock. When that lock is Schlage, buyers immediately recognize it as a top quality building product—from frequent mentions in leading home magazines. Schlage locks on your doors are an indication to buyers that your standard is quality.

REDUCED INSTALLATION COSTS WITH SCHLAGE'S ALL-PURPOSE BORING JIG

The Schlage all-purpose boring jig cuts installation time in half and assures accurate boring. This jig can also be used for reboring doors formerly bored for other type locks.



SCHLAGE®

SCHLAGE LOCK COMPANY

San Francisco • New York • Vancouver, B. C., Canada



these Special sash
attract home buyers



Home owners appreciate the value of year-round screen and storm sash for windows and doors. It simplifies their housekeeping.

One kind of combination sash is made of Armco ZINGRIP. Its protective zinc coating clings tightly through all kinds of weather to assure long service life. And the zinc surface is especially treated to take and hold paint longer.

Other combination screen and storm sash are made of Armco Stainless Steel, Type 430. They require no paint. Their soft-toned surfaces harmonize with any color scheme.

For names of manufacturers of Armco ZINGRIP and Stainless Steel screen and storm sash, write us at the address below.

Armco Steel Corporation

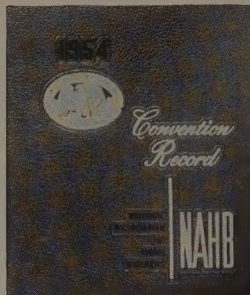


3333 Curtis Street, Middletown, Ohio
Export: The Armco International Corporation

TECHNICAL PUBLICATIONS

CONVENTION RECORD, 1954. National Association of Home Builders, Dept. HH, 1028 Connecticut Ave. N.W., Washington 6, D.C. 360 pp. 10 1/2" x 11 1/2". \$7.50

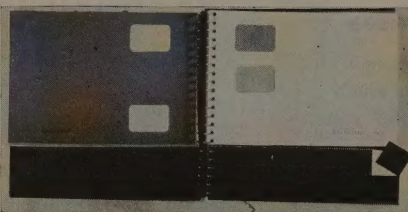
Builders who stayed at home weren't the only ones who missed important panels and



meetings at NAHB's convention. Even the 22,000 physically present were constantly frustrated by having to make a choice of two (or more) meetings taking place at the same time, and often 1 1/2 mi. apart.

This convention record offers exceptionally complete coverage of panels and committees, with separate chapters devoted to design, financing, merchandising, land planning, FHA-VA. The report gives every builder the chance for at least proxy attendance at every part of the convention. For convenience, the book is hard cover, loose-leaf bound, with thumb-tabbed index pages.

HEATING. Three manuals: Calculating Heat Losses; Small Pipe Warm Air Perimeter Heating; Design and Installation of Winter Air Conditioning Systems. National Warm Air Heating & Air Conditioning Assoc., Dept. HH, 145 Public Sq., Cleveland 14, Ohio. First manual, 48 pp., \$1; other two, 24 pp., 75¢ ea. 8 1/2" x 11"



PAINT AND COLOR. Color Harmonizer. Sherwin-Williams Co., Dept. HH, Architectural Service Div., Cleveland 1, Ohio. For professional use only, free upon letterhead request. 100 pp. 7" x 7"

For finger-tip selection of good color harmonies, from over 700 color combinations. Detachable sample chips of the 93 colors represented permit matching.

FLOORING. How You Can Lay a Rubber Tile Floor. Design chart and complete instructions for installation of this popular flooring. Rubber Mfrs. Assoc., Inc., Dept. HH, 444 Madison Ave., New York 32, N.Y. Single folded sheet 21" x 27"

continued on p. 212

Introducing...
the most compact and
versatile central summer
cooling unit now on the market!



**simple and easy
to install as...**



Basic unit for addition to any forced-air warm air furnace.
(only 43" high)

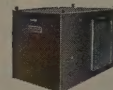


Basic unit with blower package added—converts any warm-air gravity furnace into a forced-air winter-heating and summer-cooling system.
(only 60" high)



Add space cap to basic unit with blower and you have a compact summer cooling unit for commercial use in offices, stores, restaurants, etc.
(only 72" high)

New Williamson 2 and 3-ton water-cooled space refrigeration systems need only 2.7 sq. ft. base area, fit into smallest home. Unique design makes handling and installation easy. Basic unit provides complete summer cooling with forced air warm air furnace. Add blower unit for use with gravity type, and space cap for large space cooling. Thermostat control. Just set thermostat. Air-cooled models also available.



Williamson horizontal space cooler requires no floor space. Install in attic or crawl space. 24" high, 22" wide, 35" deep.

THE WILLIAMSON HEATER COMPANY

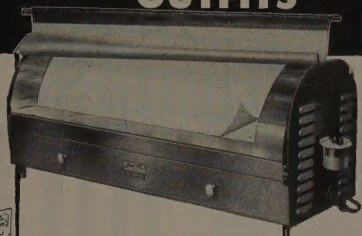
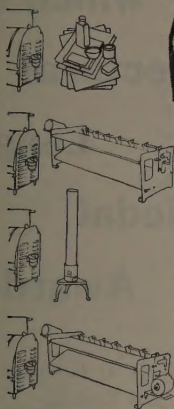
Manufacturers of the industry's most complete line of warm air furnaces, pipe, fittings and ducts for home and commercial use.

THE WILLIAMSON HEATER COMPANY
3527 MADISON RD., CINCINNATI 9, OHIO

Please send me complete information on:
☐ Basic units ☐ with blower ☐ with space cap ☐ Horizontal cooling unit ☐ W.A. furnaces. ☐ Prefab. Duct & fittings

Name _____
Company _____
City _____ Zone _____ State _____

AMAZING! the Time and Money Saved WITH *Spee-Dee* WHITEPRINT OUTFITS



**Make Exact Duplicates in as little
as One Minute at less than 2c sq. ft.**

Inexpensive and simplest of all print making equipment! Thousands in daily use. Enables anyone to make accurate, positive whiteprints from translucent originals. Saves up to 80% of commercial blueprint costs—quickly pays for itself! Makes photocopies, too. Just plug in. Uses diazo (moist or ammonia dry) process. Complete portable *Spee-Dee* outfits in 12" x 18", 18" x 24" and 24" x 36" models. Prices start at \$55.00. Also a full line of 42" width capacity volume production whiteprinters at moderate prices.

**10 DAY
FREE TRIAL**

PECK & HARVEY

Mfrs. of Whiteprint, Blueprint & Photocopy Equipment
5632 NORTH WESTERN AVE., CHICAGO 43, ILLINOIS

Send today for Free
Spee-Dee Brochure



Scott's® LAWN BEAUTY a Plus Value For Your Homes . . .

A sparkling green lawn helps make any house a home. With today's emphasis on outdoor living, large window areas, etc., thick, velvety Scott lawns provide the perfect setting. Their outstanding beauty is a standard of perfection recognized everywhere. Best of all, your homes can have the distinction of Scotts turf for very little, if any more, than ordinary lawns.

Profit by this *plus value* and resulting enthusiastic client satisfaction by always specifying and using *Scott's* Seed and Turf Builder. Write at once for our turf specialists' recommendations and prices on your requirements.

O M Scott & SONS CO, 33 Spring St, Marysville, O
also Palo Alto, California



**FREE Lawn Care®
BULLETIN SERVICE**

Keep up to date on lawn building developments along with practical tips on soil conditioning, grading, feeding, drainage, seeding, sprinkling, etc. Life-time subscription to *Lawn Care* and digest of 100 back issues is yours for the asking.



IT PAYS TO SPECIFY *Scott's* LAWN PERFECTION

Suggestion for BUILDERS

You find, when selling a house, that its special features help you make the sale. You know, too, that a lot of sales are closed in the kitchen—because that room is the focal point of interest for the homemaker.

A few years ago, the progressive builder could sell his houses if the kitchen had space for an electric range and electric refrigerator. Then he found that his kitchens must accommodate several more electric appliances. In fact, it usually was difficult to make the sale without them.

Now there's one more appliance that customers demand—a modern home freezer. The reason? They want to be **modern—live electrically!**

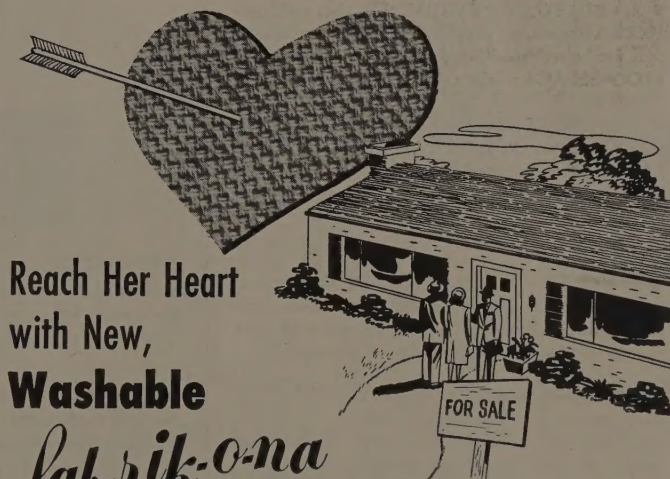
More and more home buyers every year want this appliance that saves them time, money and labor, allows them to serve better meals, at lower cost. Last year, more than 1,000,000 freezers were installed in American homes.

That's why you should design your kitchens with space for a freezer—allowing, too, for the weight of this appliance and its contents, in figuring the load-bearing strength of the floor.

Don't miss out on this important selling feature. If you need more information, write to any of the manufacturers listed below—or see their dealers in your community.

FARM & HOME FREEZER SECTION
National Electrical Manufacturers Association
155 East 44th Street, New York 17, N. Y.

ADMIRAL • BENDIX • COOLERATOR • CROSLEY • DEEFPREEZE
FRIGIDAIRE • GENERAL ELECTRIC • GIBSON • HOTPOINT
INTERNATIONAL HARVESTER • KELVINATOR • NORGE • PHILCO
QUICCFREZ • REVCO • SEEGER • WESTINGHOUSE



Reach Her Heart
with New,
Washable

fab-rik-o-na
Trade Mark Reg. U. S. Pat. Off.

FABRIC WALL COVERINGS

The discerning lady in the picture is the one who'll ask the key questions about wall coverings—including their "washability"! Together with that all-important feature, *Fab.rik.o.na's* smartly-hued woven textures will add depth and "feel" to your interiors—supplying the soft beauty that makes rooms continuously livable, and the year-after-year wear that makes them practical. You're sure to please her with *Fab.rik.o.na's* rugged textured Burlap, or the more subtly woven Amerspun.

Send for booklet with samples.

H. B. WIGGIN'S SONS CO.

58 Arch St., Bloomfield, N. J.



VITROLINER CHIMNEYS

VITROLINER, the Pioneer Chimney, sells on its "tried and proven" 11-year record of quality and continuous leadership! It is exactly what modern builders and architects desire in a prefab chimney for 1 and 2 story buildings:—

- A FINISHED PREFABRICATED CHIMNEY, tailor-made at the factory for each individual building!

- A LIGHTWEIGHT CHIMNEY, that needs no EXTRA structural support! It is easy to handle and fits between ceiling joists. Saves VALUABLE FLOOR SPACE in the utility room.

- A WELL DESIGNED CHIMNEY, that architects admire for its APPEARANCE AND FLEXIBILITY. The chimney housing has a "new modern look" that harmonizes with today's modern-styled homes. The chimney location can be in any part of the house.

- A QUALITY-BUILT CHIMNEY that insures long life! Built of heavy gauge steel, coated with acid-resisting porcelain completely covered with molded Fyrex non-combustible insulation.

- AN "ENGINEERED" CHIMNEY, that creates greater heating plant efficiency and a better draft than other designs or a comparable masonry chimney. Vitroliner also provides ATTIC VENTILATION.

- A LOW-COST CHIMNEY—Leading builders say, "Vitroliner chimneys have the LOWEST INSTALLED PRICE when you consider total labor and material."

Write for illustrated circular today. Investigate this fast selling modern chimney.



CONDENSATION
ENGINEERING CORPORATION
3511 W. POTOMAC AVE., CHICAGO 51, ILL.

TECHNICAL PUBLICATIONS *cont'd.*

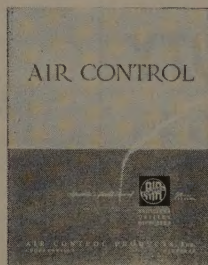
PAINT AND COLOR. Colorizer 162 Color Pack, and Exterior Decorating Guide. Colorizer Associates, Dept. HH, 345 N. Western Ave., Chicago, Ill. 162 pp. 4" x 8"

Two tools for the color-conscious builder, these booklets offer selections from the over 1,300 colors offered by this manufacturer. The folder on exterior color combinations should prove especially useful for subdivision color planning.

TECHNICAL FILMS. The Story of Radiant Heating (15 min.); Down the Drain (11 min.); The Science of Making Brass (30 min.). Chase Brass & Copper Co., Executive Offices, Dept. HH., Waterbury 20, Conn.

Available on a loan basis, these sound and color films could be used as an informative interlude in meetings of local builders' associations, by architects, or contractors. All procedures are shown in detail through animation and diagrams as well as photography. Technical schools and other groups interested in plumbing and heating may also borrow the films.

HEATING AND VENTILATING. Air Control. Air Control Products, Inc., Dept. HH, Coopersville, Mich. 48 pp. 8 1/2" x 11"



Registers, grilles and diffusers for heating, ventilating or air-conditioning applications are published here along with engineering data and installation information.

HARDBOARD. Masonite Presdwood in Architectural Design and Construction. Home Service Bureau, Masonite Corp., Dept. HH, 111 W. Washington St., Chicago, Ill. 32 pp. 8 1/2" x 11"

Illustrated booklet on uses, specifications, and working of high- and medium-density hardboards. Useful for either the new house-builder or the remodeler. Separate booklet on use of hardboards as concrete forms is also available.

FLOORING. How To Finish Wood Floors. Pierce & Stevens, Inc., Dept. HH, 710 Ohio St., Buffalo 3, N.Y. 24 pp. 5" x 8". Illus. 10¢

Manual of modern methods and materials for bringing out and preserving the beauty of new or old wood floors.

FORUM was first
to present . . .

all the buildings which won Architectural League Gold Medal Awards

Since 1950, the Architectural League of New York has awarded the Gold Medal in Architecture to six celebrated buildings . . .

- 1950** Welfare Building, US Naval Training Station, Great Lakes, Illinois, by Skidmore, Owings & Merrill.
The Museum of Modern Art, New York City, by Louis C. Jaeger associated with Edward D. Stone.
- 1951** Harvard University Graduate Center, Cambridge, Massachusetts by The Architects Collaborative.
- 1952** Hotel Panama, Panama City, Canal Zone, by Edward D. Stone
- 1953** Fitchburg Youth Library, Fitchburg, Massachusetts by Carl Koch.
- 1954** Lever House, New York City, by Skidmore, Owings & Merrill.

Read FORUM and see the Architect's favorite buildings first.

Subscribe today—
basic professional rate for a 1-year subscription to U.S.A., Possessions, Canada, Philippines & the Pan American Union—\$5.50

THE MAGAZINE OF BUILDING

architectural forum

540 North Michigan Avenue
Chicago 11, Illinois